

AMAZING STORIES



DECEMBER
25 Cents

The
Inevitable Conflict
by
Paul H. Lovering

LEONOREY & CO.

Other Science Fiction by:

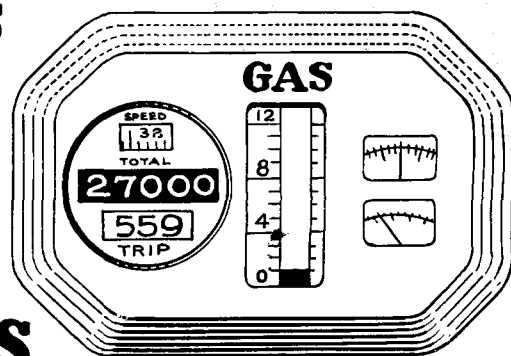
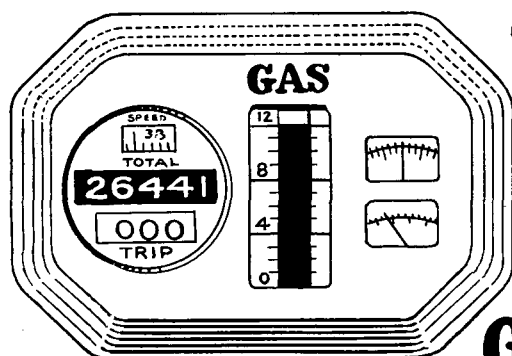
Over the Mountains from Los Angeles

559 Miles

on

11

Gallons of GAS



Think of it! FIVE HUNDRED FIFTY-NINE MILES over rough mountainous country burning only ELEVEN GALLONS OF GASOLINE. Imagine more than FIFTY MILES to the GALLON. This is what the WHIRLWIND CARBURETING DEVICE does for D. R. Gilbert, enough of a saving on just one trip to more than pay the cost of the Whirlwind.

THE WHIRLWIND SAVES MOTORISTS MILLIONS OF DOLLARS YEARLY

Whirlwind users, reporting the results of their tests, are amazed at the results they are getting. Letters keep streaming into the office telling of mileages all the way from 22 to 59 miles on a gallon, resulting in a saving of from 25 to 50% in gas bills alone.

Mark H. Estes writes: "I was making 17 miles to the gallon on my Pontiac Coupe. Today, with the Whirlwind, I am making 35 5/10 miles to the gallon. Am I glad I put it on? I'll say so!"

P. P. Goerzen writes: "I made an actual test both with and without a Whirlwind, getting 13 1/2 miles without and 34 6/10 miles with the Whirlwind, or a gain of 21 miles to the gallon. The longer the Whirlwind is in use on the machine, the better the engine runs, has more pep and quicker starting. It makes a new engine out of an old one, and starts at the touch of the starter button."

R. J. Tulp: "The Whirlwind increased the mileage on our Ford truck from 12 to 26 miles to gallon and 25% in speed. We placed another on a Willys-Knight, and increased from 12 to 17 miles per gallon."

Arthur Grant: "I have an Oakland touring car that has been giving me 15 miles to the gallon average, but I can see a great difference with the Whirlwind, as it climbs the big hills on high and gives me better than 23 miles to the gallon of gas, which is better than 50% saving in gas."

W. A. Scott: "I had my Whirlwind for three years. Winter and summer it gives the same perfect service, instant starting, smoother running, and what I saved in gasoline these last few years has brought other luxuries which I could not have afforded previously."

Car owners all over the world are saving money every day with the Whirlwind, besides having better operating motors. Think what this means on your own car. Figure up your savings—enough for a radio—a bank account—added pleasures. Why let the Oil Companies profit by your waste? Find out about this amazing little device that will pay for itself every few weeks in gas saving alone.

FITS ALL CARS

In just a few minutes the Whirlwind can be installed on any make of car, truck, or tractor. It's actually less work than changing your oil, or putting water in the battery. No drilling, tapping or changes of any kind necessary. It is guaranteed to work perfectly on any make of car, truck or tractor, large or small, new model or old model. The more you drive the more you will save.

GUARANTEE

No matter what kind of a car you have—no matter how big a gas eater it is—the Whirlwind will save you money. We absolutely guarantee that the Whirlwind will more than save its cost in gasoline alone within thirty days, or the trial will cost you nothing. We invite you to test it at our risk and expense. You are to be the sole judge.

FREE TRIAL COUPON

SALESMEN AND DISTRIBUTORS WANTED

To Make Up to \$100.00 a Week and More

Whirlwind men are making big profits supplying this fast-selling device that car owners cannot afford to be without. Good territory is still open. Free sample offer to workers. Full particulars sent on request. Just check the coupon.

WHIRLWIND MANUFACTURING CO.

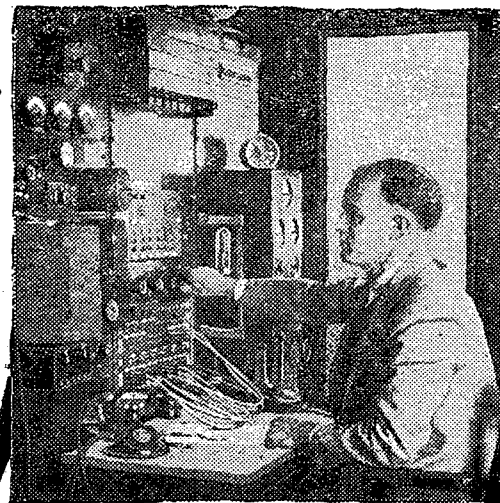
Dept. 732-A, Station C Milwaukee, Wisc.

WHIRLWIND MANUFACTURING CO.
Dept. 732-A, Station C, Milwaukee, Wisc.

Gentlemen: You may send me full particulars of your Whirlwind Carbureting device and free trial offer. This does not obligate me in any way whatever.

Name
Address
City
County State
☐ Check here if you are interested in full or part time salesmen position.

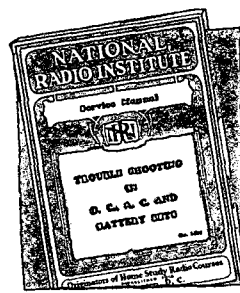
I will train you at home to fill a **BIG PAY** **Radio Job!**



Special Offer

Service Manual on Trouble Shooting in Radio Sets Sent Free

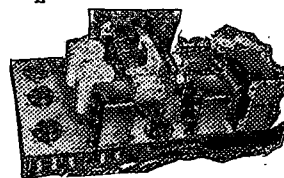
Act now and receive in addition to my big free book "Rich Rewards in Radio," this Service Manual on D.C.,



A.C., and battery operated sets. Only my students could have this book in the past. Now readers of this magazine who mail the coupon will receive it free. Overcoming hum, noises of all kinds, fading signals, broad tuning, howls and oscillations, poor distance reception, distorted or muffled signals, poor Audio and Radio Frequency amplification and other vital service information is contained in it. Get a free copy by mailing the coupon below. **ACT NOW.**

I will give you my new 8 OUTFITS of RADIO PARTS for practical Home Experiments.

You can build over 100 circuits with these outfits. You build and experiment with the circuits used in Crosley, Atwater-Kent, Eveready, Majestic, Zenith, and other popular sets. You learn how these sets work, how to make them work. This makes learning at home easy, fascinating, practical.



I am doubling and tripling the
salaries of many
in one year and
less Find out about
this quick way to

**BIGGER
PAY**

**FILL OUT AND MAIL
THIS COUPON**

TODAY

J. E. SMITH, President
National Radio Institute, Dept. INS
Washington, D. C.

Dear Mr. Smith: I want to take advantage of your special offer. Send me your two books, "Rich Rewards in Radio" and "Trouble Shooting in D.C., A.C., and Battery Sets." I understand this request does not obligate me and that no salesman will call.

Name.....

Address.....

City..... State.....

If you are earning a penny less than \$50 a week, send for my book of information on the opportunities in Radio. It is free. Clip the coupon NOW. Why be satisfied with \$25, \$30 or \$40 a week for longer than the short time it takes to get ready for Radio.

Radio's growth opening hundreds of \$50, \$75,
\$100 a week jobs every year

In about ten years Radio has grown from a \$2,000,000 to a \$1,000,000,000 industry. Over 300,000 jobs have been created. Hundreds more are being opened every year by its continued growth. Many men and young men with the right training—the kind of training I give you—are stepping into Radio at two and three times their former salaries.

You have many jobs to choose from

Broadcasting stations use engineers, operators, station managers and pay \$1,200 to \$5,000 a year. Manufacturers continually need testers, inspectors, foremen, engineers, service men, buyers, for jobs paying up to \$7,500 a year. Shipping companies use hundreds of Radio operators, give them world-wide travel with board and lodging free and a salary of \$50 to \$150 a month. Dealers and jobbers employ service men, salesmen, buyers, managers, and pay \$30 to \$100 a week. There are many other opportunities too. My book tells you about them.

So many opportunities many N. R. I. men make
\$200 to \$1,000 in spare time while learning

The day you enroll with me I'll show you how to do 28 jobs, common in most every neighborhood, for spare time money. Throughout your course I send you information on servicing popular makes of sets; I give you the plans and ideas that are making \$200 to \$1,000 for hundreds of N. R. I. students in their spare time while studying. My course is famous as the course that pays for itself.

Talking Movies, Television, Aircraft Radio included

Special training in Talking Movies, Television and home Television experiments, Radio's use in Aviation, Servicing and Merchandising Sets, Broadcasting, Commercial and Ship Stations are included. I am so sure that I can train you satisfactorily that I will agree in writing to refund every penny of your tuition if you are not satisfied with my Lessons and Instruction Service upon completing.

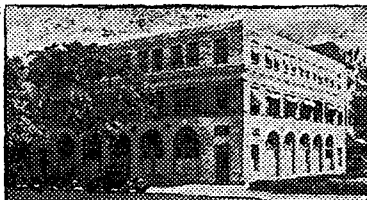
64-page book of information FREE

Get your copy today. It tells you where Radio's good jobs are, what they pay, tells you about my course, what others who have taken it are doing and making. Find out what Radio offers you, without the slightest obligation. **ACT NOW!**

J. E. SMITH, President
National Radio Institute Dept. INS
Washington, D. C.

Our Own Home

Pioneer and World's Largest Home-Study Radio training organization devoted entirely to training men and young men for good jobs in the Radio industry. Our growth has paralleled Radio's growth. We occupy three hundred times as much floor space now as we did when organized in 1914.



**Here's
Proof**



\$100 a week

"My earnings in Radio are many times greater than I ever expected they would be when I enrolled. They seldom fall under \$100 a week. If your course cost four or five times more I would still consider it a good investment."

E. E. WINBORNE
1267 W. 48th St.
Norfolk, Va.



Jumped from \$35 to

\$100 a week

"Before I entered Radio I was making \$35 a week. Last week I earned \$110 servicing and selling Radios. I owe my success to N. R. I. You started me off on the right foot."

J. A. VAUGHN
3107 S. Grand Blvd.
St. Louis, Mo.



\$500 extra in 6 months

"In looking over my records I find I made \$500 from January to May in my spare time. My best week brought me \$107. I have only one regret regarding your course—I should have taken it long ago."

HOYT MOORE
R. R. 3, Box 919,
Indianapolis, Ind.

Lifetime Employment Service to all Graduates



JULES VERNE'S TOMBSTONE AT AMIENS
PORTRAYING HIS IMMORTALITY

AMAZING STORIES

Scientific Fiction

Vol. 6

December, 1931

No. 9

In Our Next Issue

POWER, by Harl Vincent. The destiny of the world depends largely upon power. Man is only a weakling. The falls of Niagara are a giant. And to those who possess and control this thing called power belongs unlimited possibilities for autocratic control of their fellow beings. The days of wind-mills and water-mills are gone. And there is hardly any assurance that our new and latest forms are going to remain forever the best. Our well-known author, for instance, who is definitely interested in the science of electric power, offers some astonishingly interesting possibilities for a certain substitute of our present-day power-making history of the future.

TUMITHAK OF THE CORRIDORS, by Charles R. Tanner. It is not necessarily cowardice that makes a people retreat further and further from an enemy which has ruthlessly brought complete destruction and death to thousands. It is sensible caution that comes with experience. But always there is someone—in generations far removed, perhaps—who dares to risk all in an effort to release his people from the bonds of such enslaving fears. (Crowded out of December issue.)

THE PLANET OF THE DOUBLE SUN, by Neil R. Jones. Here is another sequel relating the extraordinary adventures of Professor Jameson, who first started his voyage in a ship of his own construction, in which he was placed in suspended animation and was later rescued when his ship was found, and was at first mistaken for a satellite. Very much more exciting even than its two predecessors.

THE INEVITABLE CONFLICT, by Paul H. Lovering. (A Serial in two parts) Part II. In old times the nations of the world were usually ruled by men. Yet there were some ruling Queens. Queen Elizabeth, for instance, governed with an iron hand. And every now and then some woman would be known to do her part in settling the destinies of nations. Now there is a growing tendency to place women on an equal footing with men in the fields of politics. Who can tell how far-reaching these tendencies may become? In the concluding chapters our author tells us.

And other unusual science fiction

In Our December Issue

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Our Cover

this month depicts a scene from the story entitled, "The Inevitable Conflict," by Paul H. Lovering, in which Mowbray's hastily rigged-up machines and his trained men, with the aid of the women from the "Legion," do justice to the faith of Mowbray in a terrific battle for the continued independence of the United States of America, from the Mongolian Empire. Part I published in this issue.

Cover illustration by Morey

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Big Pay Jobs for Trained RADIO Men

5000

Service Men Needed



ACTUAL PHOTOGRAPH OF STUDENTS WORKING IN SERVICE DEPT. OF COYNE RADIO SHOPS

LEARN RADIO-TELEVISION TALKING PICTURES AT COYNE

TEN WEEKS of SHOP TRAINING on RADIO EQUIPMENT

Dissatisfied with your job? Not making enough money? Then let me show you how to prepare for a real job and how to make real money, in RADIO—one of the fastest growing, biggest money-making trades on earth.

JOBS LEADING TO BIG PAY

Scores of jobs are open—jobs as Designer, Inspector and Tester—as Radio Salesman and in Service and Installation work—as Operator or Manager of a Broadcasting Station—as Wireless Operator on a Ship or Airplane—with Talking Picture Theatres and Manufacturers of Sound Equipment—with Television Laboratories and Studios—fascinating jobs, offering unlimited opportunities to the Trained Man.

H. C. Lewis, Pres. **Radio Division** Founded 1899
COYNE ELECTRICAL SCHOOL
500 S. Paulina Street Dept. 91-8C Chicago, Illinois

PRACTICAL Shop Training

Come to Chicago and prepare for these jobs the QUICK and PRACTICAL way—BY ACTUAL SHOP WORK on ACTUAL RADIO EQUIPMENT. Some students finish the entire course in 8 weeks. The average time is only 10 weeks. But you can stay as long as you please, at no extra cost to you. No previous experience necessary.

Broadcasting — Television Sound Equipment

In addition to the most modern Radio equipment, we have installed in our Shops a complete model Broadcasting Station, with sound proof Studio and modern Transmitter with 1,000 watt tubes—the Jenkins Television Transmitter with dozens of home-type Television receiving sets—and a complete Talking Picture installation for both "sound on film" and "sound on disk." We have spared no expense in our effort to make your training as COMPLETE and PRACTICAL as possible. Mail the coupon for full particulars!

Free Employment Service TO STUDENTS

After you have finished the course, we will do all we can to help you find the job you want. We employ three men on a full time basis whose sole job is to help our students in finding positions. And should you be a little short of funds, we'll gladly help you in finding part-time work while at school. Some of our students pay a large part of their living expenses in this way. Get all the facts!

COYNE IS 32 YEARS OLD

Coyne has been located right here in Chicago since 1899. Coyne Training is tested—proven by hundreds of successful graduates. You can get all the facts absolutely free. JUST MAIL THE COUPON FOR A FREE COPY OF OUR BIG RADIO AND TELEVISION BOOK.

H. C. LEWIS, President
Radio Division, Coyne Electrical School
500 S. Paulina St., Dept. 91-8C, Chicago, Ill.

Send me your Big Free Radio, Television and Talking Picture Book. This does not obligate me in any way.

Name

Address

City.....State.....

DANCER ON WAY TO STARDOM

★ (NEWS ITEM)

On the very threshold of international fame and fortune, Jeanne Williams wants a new "Stage Name." Young—graceful—talented; her beautiful body is vibrant with the magnetic glow of youthful personality. Critics say her performances are "Sensational", "Exotique", and that she is at the door of stardom. . . . Now, because her name is similar to that of another star of Broadway, she wants a NEW name by which she will be featured and which she hopes to carry to fame.

WANTS A NEW NAME!

We Will Pay
\$500.00
Just for a Girl's Name

COSTS NOTHING TO WIN
 Nothing to Buy—Nothing to Sell—No Entrance Fees—No "Number Paths" Nor "Guessing" to win This Cash Prize
JUST SUGGEST A GIRL'S NAME

What an amazing opportunity! You may win this big cash prize in only a moment's time. Simply send us a name for this graceful young dancer—*nothing more to do*. Sounds easy? It is easy! The first name that comes to your mind this minute may be the very one to win \$500.00 cash. It does not have to be a "fancy" name—just some simple name that is easy to say and easy to remember—a name that will look well in blazing electric lights in front of the nation's finest theatres. Think of a name—send it TODAY—Win \$500.00 Cash.

NO WAY YOU CAN LOSE . . .

Simply suggest the winning name—that is all you have to do to get the \$500.00. We are giving the prize to advertise our marvelous Foot Balm that is even now used by many professional dancers. A famous name is a great help in advertising. The new name chosen for this rising young dancer will also be used as the name for our Foot-Balm—her fame will bring us big advertising. . . . That is why we are so generous in giving the cash prize. It is your opportunity of a life-time. Maybe your own name, or the name of a friend may be the very name we want. Nothing for you to lose—a fortune for you to win.

JUST SENDING A NAME QUALIFIES YOU FOR OPPORTUNITY TO

Win \$3,000.00

OR BUICK 8-CYLINDER SEDAN AND \$1,500.00 IN CASH BESIDES...

In this sensational advertising campaign we are giving away over FIVE THOUSAND DOLLARS just to advertise and promote our business. This money is entirely separate and in addition to the prize for the Dancer's Name. Over 50 huge cash prizes—3 fine automobiles. Think of it! You may win over \$3,000.00 cash or a new Buick 8 Cylinder Sedan and \$1,500.00 Cash besides! What a magnificent fortune! Some one is going to get it—why not you? You have just as good an opportunity to win as anyone. All you have to do to qualify for this amazing opportunity is to suggest a name for the Dancer. Do it now—it may mean a fortune for you.

\$1,000.00 CASH CERTIFICATE

Will Be Sent to You At Once . . . BE PROMPT

One thousand dollars EXTRA if you are PROMPT and win first prize. So don't delay! Send your name suggestion promptly—nothing more to do now or ever toward getting the Name Prize and to qualify for the opportunity to win the other huge prizes. *You can't lose anything*—EVERY PERSON WHO TAKES AN ACTIVE PART WILL BE REWARDED IN CASH—so send a name today.

Hundreds Have Won

Viola Lauder, Oregon, was destitute—her home burned down. She suggested a name for our toilet soap and won a big cash prize of \$900.00! H. L. Adams, Pa., won over \$2000.00 besides cash rewards as high as \$200.00 in a week. Lutz received \$500.00. Hundreds of others made happy by big prizes and rewards. Now, we are going to distribute bigger prizes than before. Anyone may win. . . . Some yet unknown person is going to win \$3,000.00 cash; many others are going to be made happy with scores of prizes as high as \$750.00. Three fine cars will be given to people submitting names.

SEND NO MONEY

You don't have to send any money—you don't have to buy anything or sell anything to win the Name Prize, No "puzzles," "number paths," "lucky numbers" or "guessing" contest to win over \$3,000.00 cash. The only thing to do now is send a name for the dancer. The first name you think of may win the prize. But, remember the EXTRA \$1,000.00 for promptness. Act at once! I will send you a \$1,000.00 Cash Certificate as soon as your name is received—I will tell you just how you stand in the distribution of over \$5,000.00 in cash prizes and fine new automobiles.

Read These Simple Rules

Contest open to all except employees of our company. Only one name may be submitted—sending more than one name will cause all names sent by you to be thrown out. Suggest a first and last name for the dancer. Contest closing date given in my first letter to you. In case of duplicate winning names, duplicate prizes will be given. Every person submitting a name qualifies for opportunity to win \$3,000.00 cash or Buick 8 Cylinder Sedan and \$1,500.00 in cash. Use the coupon or write a letter to submit name and receive all details.

WALTER BRENT, Mgr.

906 Sycamore Street Dept. 5095-PP, Cincinnati, Ohio



The Delight of Dancing Feet

. . . Do your feet ache, itch, perspire or burn? Then, try this famous Foot Balm that has brought delight to the over-worked feet of professional dancers to whom foot comfort is all important.



Winning Name Coupon

WALTER BRENT, Mgr.,
 906 Sycamore St., Dept. 5095-PP, Cincinnati, Ohio.

The Name I suggest for the Dancer is:

.....

Name.....

Address.....

City..... State.....

Rush me the \$1,000.00 Cash Certificate for Promptness and tell me how I stand for Winning \$3,000.00 cash.

"I'll PROVE in Only 7 Days that I Can Make YOU a New Man!"

No other Physical
Instructor in the
World has ever
DARED make
such an offer!

By **CHARLES ATLAS**

Holder of the Title:

"The World's Most Perfectly Developed Man"

I HAVE proved to thousands that my system of building powerful, big-muscled men begins to show real results in *only 7 days*—and I can prove it to you.

You don't have to take my word for it. You don't have to take the word of my hundreds of pupils who have added inches to their chests, biceps, necks, thighs and calves in only a few days. No sir! You can prove for *yourself*—in just one week—by the change you *see and feel in your own body*—that you can actually become a husky, healthy NEW MAN—a real "Atlas Champion."

All I want to know is: Where do *you* want big, powerful muscles? How many pounds of firm flesh do *you* want distributed over your body to fill you out? Where do *you* lack vitality, pep and robust health? Where do *you* want to take off flabby surplus fat?

Just tell me, give me a week, and I'll show you that I can make a *New Man* of you, give you bodily power and drive, and put you in that magnificent physical condition which wins you the envy and respect of any man and the admiration of every woman.

My own system of *Dynamic-Tension* does it. That's the way I built myself from a 97-pound weakling to "The World's Most Perfectly Developed Man." And now *you* can have a big, balanced muscular development like mine in the same easy way.

No "Apparatus" Needed!

You begin to FEEL and SEE the difference in your physical condition at once, without using any tricky apparatus, any pills, "rays" or unnatural dieting. My *Dynamic-Tension* is a *natural* method of developing you *inside and out*. It not only makes you an "Atlas Champion," but goes after such ailments as constipation, pimples, skin blotches, and any other weaknesses that keep you from really enjoying life and its good times—and it starts getting rid of them at once.

Don't be an underweight, always-tired weakling that nobody fears or respects! You can "talk back" to the best of them when I've built you up to man-size proportions, covered your shoulders, chest and legs with smooth layers of new muscle, put "punch" into your whole system, and enabled you to fill a real man's place in the world!

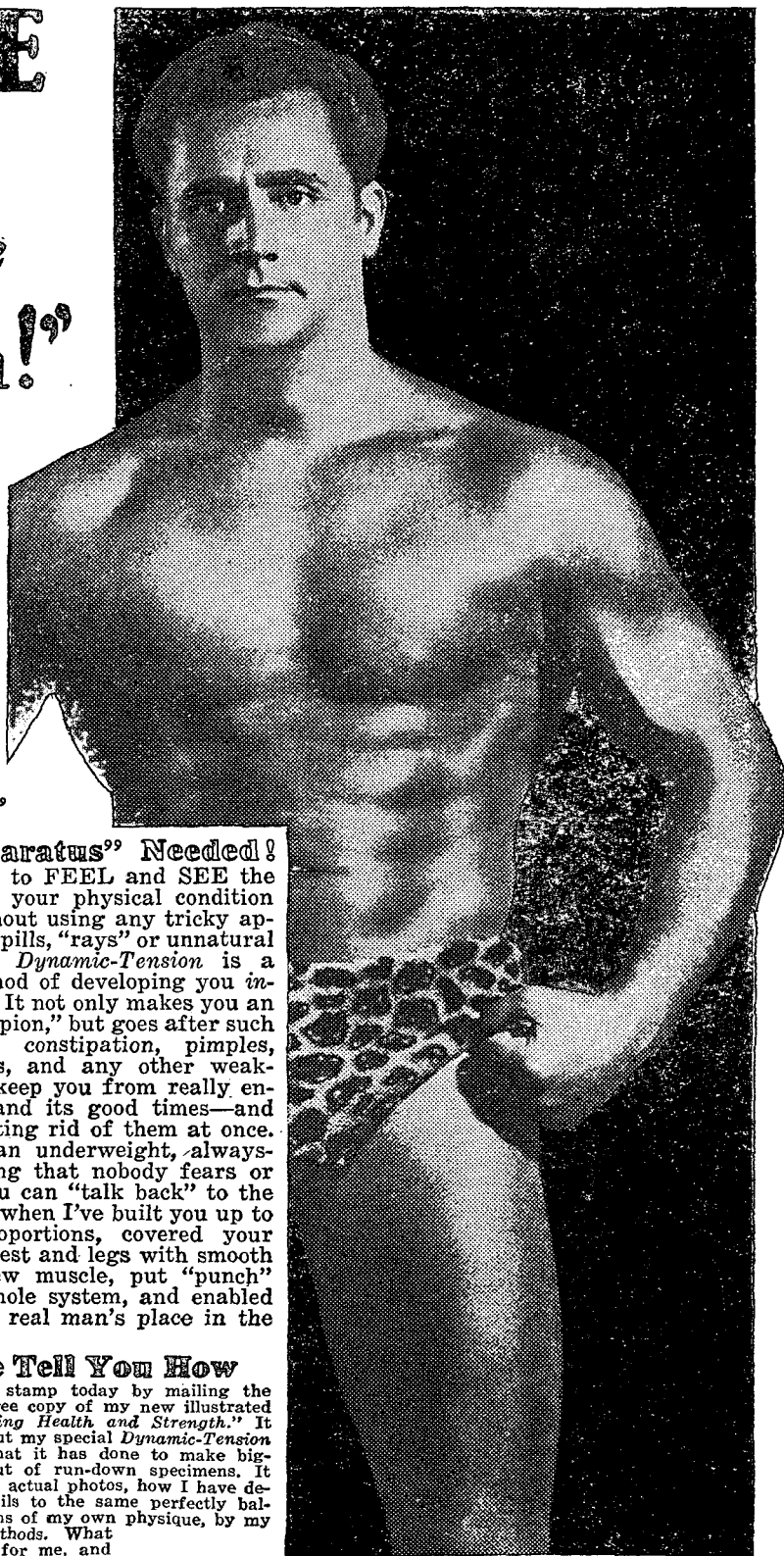
Let Me Tell You How

Gamble a 2c stamp today by mailing the coupon for a free copy of my new illustrated book, "*Everlasting Health and Strength*." It tells you all about my special *Dynamic-Tension* method, and what it has done to make big-muscled men out of run-down specimens. It shows you, from actual photos, how I have developed my pupils to the same perfectly balanced proportions of my own physique, by my own secret methods. What my system did for me, and these hundreds of others it can do for you too. Don't keep on being only 25 or 50 per cent of the man you can be! Find out what I can do for you.

FREE BOOK

Where shall I send your copy of "*Everlasting Health and Strength*?" Jot your name and address down on the coupon, and mail it today. Your own new "Atlas body" is waiting for you. This book tells you how easy it is to get, my way. Send the coupon to me personally—

CHARLES ATLAS, Dept. 10-M
133 East 23rd Street, New York City



CHARLES ATLAS, Dept. 10-M
133 East 23rd Street, New York City

I want the proof that your system of *Dynamic-Tension* will make a New Man of me—give me a healthy, husky body and big muscle development. Send me your free book, "*Everlasting Health and Strength*."

NAME
(Please print or write plainly)

ADDRESS

CITY STATE





Do YOU Want a U.S. GOV'T. POSITION?

FOR MEN AND WOMEN—AGE RANGE 18 to 50
INSIDE or OUTSIDE WORK—LOCAL or TRAVELING



SPECIAL AGENTS (Investigators)

Start \$200 to \$250 Month
 Government Secret Service Work is one of the most fascinating and interesting branches of the service for men. These positions are located throughout the country and are both traveling and stationary. In addition to the high salaries that run up to \$5,000 yearly, all traveling expenses are paid while on the road.

RAILWAY MAIL JOB

\$1,850 to \$2,700 Year

These positions are both traveling and stationary. When traveling you receive an extra allowance when away from home more than ten hours; and when you grow old you are retired with a comfortable pension for the balance of your life.



RURAL and CITY CARRIERS

\$1,400 to \$3,000 Year

The Rural Mail Carrier is out in the open air and sunshine, easy, healthy work, short hours, with a large part of the day left to do as he pleases. Thousands of city positions available for those who prefer inside work, delivering mail in large office buildings. These positions available to both country and city people.



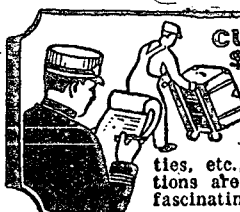
OUTDOOR POSITIONS

Ideal, healthy, fascinating employment, where you can enjoy the forests, plains, and mountain trails; sunshine and fresh air. Duties are patrolling our borders, delivering mail in cities and on rural routes, etc.

Over 900

Different Kinds of Positions

If you want a steady Government Position where strikes, hard times, politics, etc., will not affect you, where you can draw twelve months' pay every year, and then when you become old be retired on a pension for the balance of your life, get on Uncle Sam's payroll. Stop worrying, enjoy your life. Pick the position you want, it belongs to you just as much as to anyone else. Then why not get it? It is all up to you! The positions described in this announcement are only a few of the many desirable ones obtainable. Fill out the coupon below, cut or tear it out, and mail today, and full particulars will be sent you immediately.



CUSTOMS INSPECTOR

\$2,100 Year to Start

The duties are to check and inspect goods brought into this country by tourists, merchants, and manufacturers. Inspectors are required to levy the duties, etc., and see that Customs regulations are not violated. This is a very fascinating work with splendid salaries.



MEAT INSPECTORS

\$1,500 to \$1,860 Year and Upward

This is a very interesting work. Farmers, butchers or anyone with a knowledge of live stock, food products, meats, etc., are in line for one of these positions. The salaries and promotions are based on the ability and interest shown in this work. Both men and women are eligible.

BORDER PATROL GUARDS, FOREST and FIELD CLERKS, HEALTHY OUTDOOR POSITIONS

- | | |
|----------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Ry. Mail Clerks | <input type="checkbox"/> P. O. Clerk |
| <input type="checkbox"/> Prohibition Agents | <input type="checkbox"/> File Clerk |
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Extravagant Fiction Today *Cold Fact Tomorrow*

The Discs of the Planetary World

By T. O'Connor Sloane, Ph.D.



PACE is recognized as being three-dimensional. The other dimensions are more or less mathematical conceptions used in the formulation of theories of the laws of matter. But it seldom occurs to us that we are living in two dimensional space, that in a degree, we are inhabitants of "flat-land," and that if it were otherwise, strange collisions might occur in the celestial cosmos.

The sun by its gravitation along with that of each individual planet retains the earth and its companions in their orbits. The attraction of gravity and the tangential strain due to the curved paths of the planetary bodies, balance each other and hold the planets to their courses with mathematical exactness. Gravitation is all that prevents the earth with its brother and sister planets, for they are of both sexes if we may judge by the names, from flying off into space, perhaps to collide with other bodies, or to reach nearly the absolute zero of temperature, at which the motion of the molecules ceases and they come to rest.

As the orbit of the earth is slightly elliptical, the attraction of gravity holding to its path varies and this is compensated for by an increased velocity when it is nearer the sun. The path followed by the earth is an approximate circle, and lies therefore in a plane, the plane of its orbit. The compensating velocity noted above is stated in a very simple law to the effect that the areas traversed by the radiivectors in a given time are equal. Therefore for the nearer approach to the sun, the earth has to speed up a little—if it did not, we would fall into the sun, nearly a hundred million miles of a fall.

The path of the earth referred to the sun, being an ellipse which is an approximate circle, defines a plane, the plane of its orbit. Its polar axis is approximately perpendicular to this plane, and its daily rotation therefore lies nearly in this plane. The earth's planetary relations are to be referred to this plane—it is a two dimensional motion and suggests flat-land. So as far as our earth in its relation to the sun is concerned, it operates in an approximately two dimensional space.

It would be interesting if we could get as near to the conception of four dimensional space somewhere in this universe as we can to that of two dimensional space.

For the two dimensional idea to apply to the planetary system, we should have to assume that all planetary bodies revolve around the sun rigorously in one plane. But this they do not do—we may express it as saying that each planet has its own plane in which its motions are contained. This plane we homunculi define from the motion of our own little earth. Suppose we were inhabitants of gigantic Neptune, Jupiter or Saturn, we would have another plane, another ecliptic.

Yet the solar system may be described as contained within a disc. Referred to angular measurements of inclination from the earth's orbit, Mercury, true to his name, is the worst sinner, his angle being 7 degrees, while stately Uranus is only about three quarters of a degree out of our "flat-land" plane.

The sun is substantially spherical and radiates its heat in all directions. An infinitesimal part of it is received by the planets. If we calculate the cross-sectional area of the earth as a disc and allow an absorption of half the heat that falls upon it, and compare this with the area of a sphere nearly 290 millions of miles in diameter, we will get the approximate fraction of the heat of the sun which our earth receives.

The calculation will come out approximately, indicating that two billionths of the heat of the sun is received upon the earth. Suppose that half of this is reflected, we find that one billionth of the heat of the sun is absorbed by our globe. Our readers may go a step further and calculate how much of this heat a man standing in the sun will receive; it is so little that it may be called a differential of the radiations of our friendly sun. Yet a man will seek the shady side of the street in sunny weather.

If we calculate the area of the earth, acted on by the sun as the surface of its hemisphere, the ratio will favor the sun twice over compared to the above statement. But even at that the figures are impressive.

The idea of bringing out the doctrine of planetary orbits is to show how near it comes to two dimensional space. The planets move in flat-land. The diameter of these bodies is so small in proportion to the ratio of their orbits that they do give us an amusing presentation of the ways of flat-land. Of course, it is purely of fantasy, but the amusement comes in when we consider how our terrestrial cosmos is almost a disc.

The Inevitable Conflict

By Paul H. Lovering

Author of "When the Earth Grew Cold"

TO say now that women may be commandeered into active fighting service at any time in the future, would seem to be the height of ridiculousness. The universal male cry would probably be, "And what earthly good could women be as soldiers!" Yet Joan of Arc led her soldiers to phenomenal victory and women in Russia today are doing work still exclusively man's everywhere else in the world. And in the field of politics, woman's voice is heard more and more. Even if it is not imminent, it is more than interesting to speculate about the possibility. Mr. Lovering, who is well known to our readers, has more than idle speculations on the subject and has worked his ideas into an engrossing story of the future.

Illustrated by MOREY

CHAPTER I

YOUR words are treasonable."

Matriarch Victoria Arston's cold, gray eyes compressed to pin-points of icy emphasis.

"If any subject of Matriarchy of the United Companies had given utterance to such statements, I would condemn him to the lowest levels of our deepest mines."

General K'ung Fu, Mongolia's famous soldier-statesman, ambassador to the court of the great American Matriarchy, spread his hands in a gesture of courteous regret.

"I must disavow intention to offend. When I spoke of the military impotence of America under the government of the United Companies, I only inferred a comparison between conditions here and in my own country."

He smiled gently.

"Ours, Eminent Matriarch, is a masculine civilization. Men are our leaders, from our glorious Emperor—exemplar of all masculine virtues—to the humblest subject in his home."

Smiling still, he spread his hands again in courteous disavowal of intentional offense.

"Different countries—different customs. What Mongolia deems desirable is not what America esteems."

The Matriarch had heard him in cold silence.

"We do not welcome sentiments such as you have expressed, or ideas such as you have voiced—"

She halted protestations with imperious hand.

"You will understand, general, my remarks are in no sense personal. They are dictated solely by circumstances of state, more evident to our eyes than to yours after so brief a residence as you have had in America. You must not take too seriously the expressions of such immature and inexperienced youths as Stephen Mowbray with whom, I know, you have conversed."

She smiled as his eyes narrowed slightly in surprise.

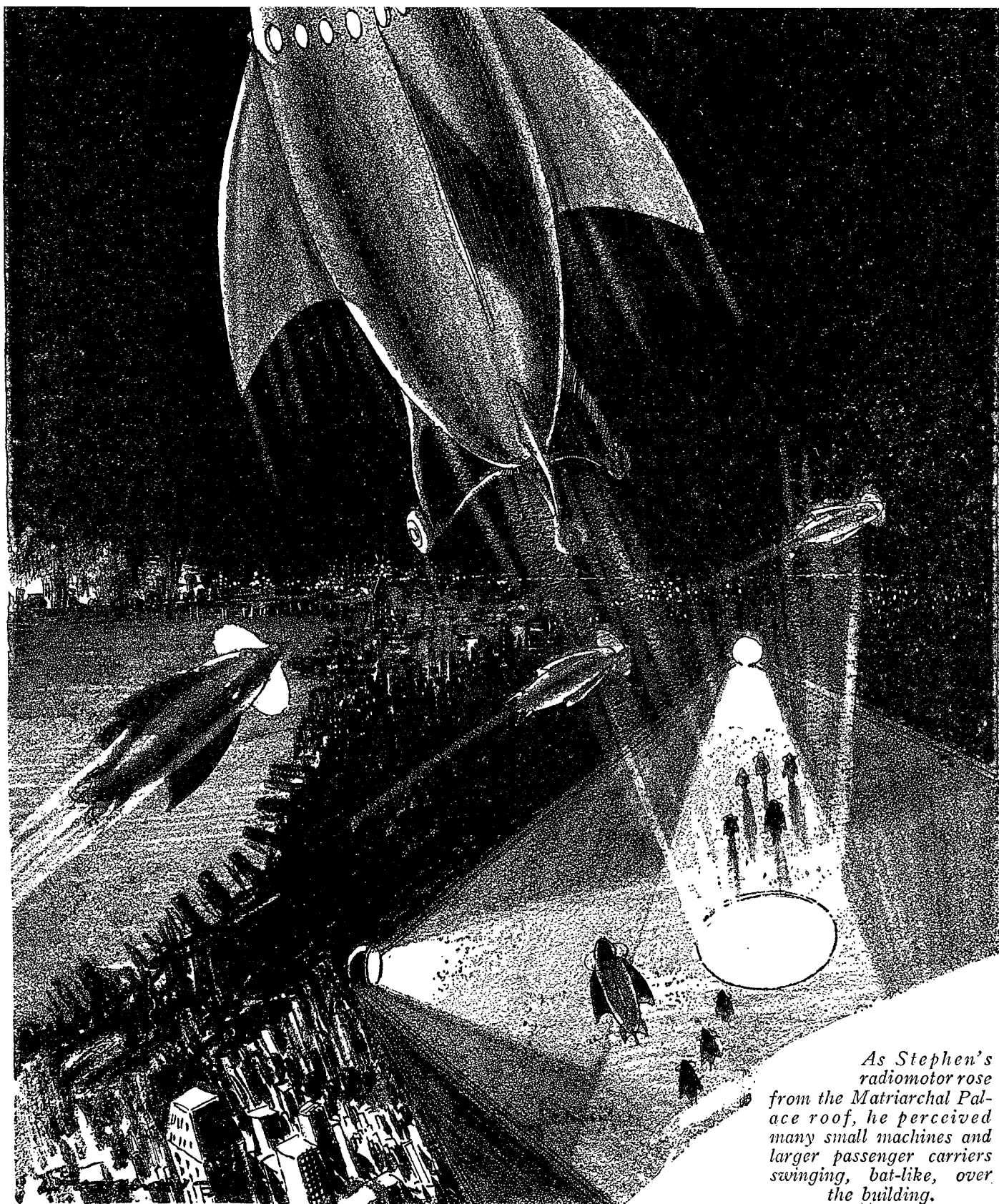
"Even your own masculine government," she continued, icily, "has its reckless young rebels."

Mongolia's ambassador winced under her biting reference to the brief, vain revolt of his emperor's eldest son, which that able ruler recently had crushed with ruthless hand. He also recalled that his predecessor had departed hastily from the American court following a sharp interview with this masterful woman, in which she had hotly resented a charge of secret support for the youthful insurgent. His own orders had been to pacify her, in order that there might be no open break or interruption of the enormous American tribute to Mongolia, until the Asiatic war genius had perfected plans upon which he long had been meditating.

"From the time the Matriarchy assumed control of America," she continued, leaning forward and emphasizing her words with a stern forefinger, "we have perceived the folly of permitting discussion of the absurd doctrine of 'men's rights.' Long before the republic collapsed, a victim to the incapacity of masculine rule."

General K'ung winced slightly. She noted it and a half-smile wreathed her firm lips.

"Long prior to its collapse," she pressed on ruthlessly, "women had been conducting its affairs. So-called 'Cap-



*As Stephen's
radiomotor rose
from the Matriarchal Pal-
ace roof, he perceived
many small machines and
larger passenger carriers
swinging, bat-like, over
the building.*

tains of Industry' had become mere figureheads. I am reciting history, general, but it is necessary to recall it to your mind in order that you may understand America."

Coldly furious, she did not spare him.

"Actual management of the great companies had been in the hands of their secretaries—women, who had broken away from the absurd taboo of the past that their place was in the kitchen and the nursery—and who had devoted their lives to the conduct of giant business enterprises. They were the super-women of a masculine decade, the motors that drove industry, directed politics, molded the press and controlled legislation. Even then——"

She transfixed the unsmiling diplomat with a compelling finger.

"Even then, they possessed a dim understanding of the great destiny of the sex. They perceived the incapacity, the futility of man. They resented masculine lust for sports involving physical danger——"

"Chief among these, I presume," interjected K'ung Fu suavely, "was war?"

Her heavy hand fell, palm downward, on the table in vigorous assent.

"Absolutely! For untold centuries, patient, submissive women had been venturing within the Valley of the Shadow to bring men children into being—and for what purpose? That they might be accoutered in the gaudy trappings of militarism and sent against the children other mothers had borne. Millions of lives wasted—industry turned from its sane channels—passions inflamed—hatred engendered—false ideals of heroism created—and what did it all avail? When, in all time, was there a war which, in itself, was good, or which brought results comparable with the sorrow, suffering and destruction it entailed?"

"If I am questioned," he replied, smiling easily for the first time, "I fear I must answer as a soldier—that there are many wars which bring compensations in the cultivation of a revived martial spirit among the people, in the subordination of sordidly material well-being to the concept of the common weal. Even Nature, Eminent Matriarch, wars in her storms and the air is always sweeter after a thunder shower."

Her heavy brows contracted ominously. After a pause, a wintry smile broke through her stormily compressed lips.

"We cannot meet on common ground," she declared. "You see life from a viewpoint we know to be absurd and unreasonable. However, to continue with my recital. After women had obtained complete control of American affairs, had thrown aside republicanism and substituted our efficient matriarchy under my distinguished ancestor, the first Victoria Arston, lingerings of discontent persisted among the men."

"Is it possible?" ejaculated the general, suavely ironic.

"Theirs was the old, ignorant, masculine dissatisfaction with a settled state of affairs," she continued curtly. "Theirs was the urge for the so-called 'progress' that had been observable since the dawn of history."

"I understand," he declared. "I understand—perfectly."

"For their own good and also for the peace of the state, we were forced to drastic action. Agitators were sent to the mines, timber camps and mountain quarries, forbidden to marry and kept isolated until their breed

had expired. This occurred generations ago. Thereafter, we had peace. Now, when we have occasion, at rare intervals, to warn sporadic mouthers, the memory of that earlier lesson always is sufficient to check pernicious preachers of the doctrine of 'men's rights.'"

"If I were an American and harbored the wholly heretical masculine opinions I do," the general laughed, "I certainly should think long and frequently about those mines and quarries."

"With good reason," she assured him, biting, "for all your sons and grandsons would bear you company, while your daughters and granddaughters would be forbidden to marry. We extirpate treason root and branch."

"We, in China, in what we had considered—mistakenly, I now see—as our new age of liberalism, have adopted the principle that justice is satisfied with visiting the penalty solely on the individual guilty of the crime."

"You refuse to understand the difference in our viewpoints," she replied, head imperially high. "Nothing in Mongolia compares with conditions here. Treason, among you, is directed against an individual—your Emperor or his representative. As in all masculine governments, you have only a succession of steps in power, culminating with your ruler. Each is filled by a man who represents that step during his period in office. Here, there is only the Matriarchy. There are no individuals. From myself to the most modest director of ten of men workers, all women are a part of a great machine. Treason is not against an individual, but against the matriarchy as a whole."

"UNDOUBTEDLY there is a difference I cannot perceive," he said, smiling broadly. "Needless to say, I shall be most circumspect in word and deed. I would not have presumed to say outside this chamber what I have remarked to your eminence, and you will recall I spoke as I did in answer to your questions."

She nodded agreement, her grim face relaxing.

"After all, we cannot be too careful, with Mongolia before our men as a survival of the theory of masculine dominance."

Declining to reopen the argument, K'ung Fu pressed on to another subject.

"May I assure my gracious master, Eminent Matriarch that there will be an end to agitation by those falsely assuming to represent the Matriarchy in seeking to excite our women to rise and take over the reins of government?"

If his hooded eyes observed a slight, startled raising of her heavy brows, he gave no sign. She replied haughtily.

"Am I accused of inciting Mongolia's women to rebel?"

"Not at all, Eminent Matriarch—only that those guilty of this offense claim to be in your pay and to be following your instructions."

She had a vivid picture of secret agents sobbing out, under torture, certain statements that had best not been said to the fiery Asiatic ruler.

"Would my disavowal of these people and their purposes suffice to reassure the Emperor?" she asked, after a thoughtful pause.

"Absolutely."

She leaned across the table, her heavy face stern.

"Then, so assure him, general."

She rose with royal dignity. He bowed, in a foreign fashion unknown to the men of America, and she did not withdraw her hand as he bent low over it.

"A masterful person," she murmured, watching his strong, heavy figure until it disappeared through hangings held apart by graceful, beautiful boy pages. "If the republic had been filled with such as he——"

She smiled whimsically.

"who knows whether we should have found it so easy to upset the old government?"

She surveyed her own strong figure, rounded and pleasing despite the years evidenced by her graying hair, and her smile deepened.

"With such men at the helm of American affairs," she continued, laughing, "there might not have been opportunity or the need for change."

A discreet hum sounded from a button on her shoulder. She inclined her head slightly.

"Yes?" she asked, haughtily.

"Eminent Matriarch! General Semiramis Bullvers, commander of the Amazons, reporting," said a stern feminine voice.

"Yes," impatiently.

"The lowest-caste workers are marching on the Food Depots. May I ask that you effect contact by Electrono for a more complete report."

Lips compressed, the Matriarch seated herself at a table and pressed a button. A red spot of light leaped from a metallic stanchion and was centered on her forehead, completing thought connection with General Bullvers, hereditary commander of the women's corps. There was no magic for her in the familiar communication system, by which thought impulses had been linked with radionic power transmission for the interchange of information without waste of time or energy in speaking.

"Throw a cordon around the ways leading to the Depots," she directed, voicelessly.

"It has been done, Eminent Matriarch."

"Use gentle means, if possible. Men's lives are valuable in industry and must not be sacrificed. If necessary, shower the rabble with sleep rays."

"The rays have been tried and have failed. They have found means for counteracting their effect."

"This is unbelievable! We know nothing of such a counter-agent. How did they devise one?"

"I do not know," the Amazonian leader replied. "Our communal Telemnons also have been malfunctioning for days and we have been unable to read the mob mind of the city accurately."

"Your failure to report these extraordinary events is culpable, general. However, there still remains the Death Ray. Use it, as a last resort,—but remember, I shall hold you accountable for needless slaughter of even these low-caste males. Act at once, as I have commanded."

"I salute you, Eminent Matriarch."

The red spot dimmed and disappeared. The matriarch turned to a large cabinet. Under her ministrations, it sprang into life and as she slowly revolved the massive metal cylinder on noiseless bearings, a panorama of gigantically extended city life unrolled before her eyes.

"At least, they have not found means of fogging the Televis," she murmured, studying the changing pictures with keen eye.

Gigantic factories of the Clothing Company, con-

structed solely of a glass with tensile strength greater than steel, yet more ductile than soft iron, swept across the face of the Televis. Into them was admitted the precise degree of light and exterior heat for the most productive labor.

Followed a panorama of the metal-working centers, titanically powerful buildings, constructed especially to resist the rending, explosive force of released atomic energy, with which ores were broken down and their stores of precious materials released for industry. A moment later, she caught a glimpse of the area where the workers in earth fashioned wares for a world denuded of nearly all other industrial productivity following Mongolia's conquest of Asia, Europe, Africa and Australia. However, her thought was not on the industrial miracles of the Matriarchy. She spun the Televis to a view of the great central Depot of the Transportation Company, where gigantic radiomotors, each carrying hundreds of passengers, were landing or departing with methodical regularity.

OVER these commercial craft, gigantic helicoptic radiomotors floated, each carrying the sinister black flag of the Penal Company, hereditary police of the new government. High above all flashed, for a moment, a graceful frigate of the Amazonian Corps, distinguished from all other craft by its arrogantly royal purple and gold flag of the Matriarchy. She followed the aircraft in its flight across the city, past the Community Houses for unmarried workers of both sexes, the gigantic Domiciliary Establishments for the married and the Juvenile Training Homes, in which all children were placed at an early age to be reared and educated.

Arston saw none of these commonplace wonders of the gigantic industrialized city. Her attention was riveted on the racing radiomotor, which she recognized as that of General Semiramis Bullvers. The machine swept to a landing on a huge warehouse of the Food Company. The commander of the Amazons stepped out and trained a gigantic Telemnon on the canyon-like street on which the building faced.

The Matriarch saw her laboring with the thought-reading instrument for several moments before she thrust it aside impatiently. Her gesture clearly indicated that the delicate Telemnon was not bringing to her a record of the mass mind of the mob. Arston manipulated the Televis cylinder until she was able to see the leaderless marching throng, aimlessly pressing through the streets.

"Preposterous!" she exclaimed. "Mob rebellion for the first time in generations!"

She studied the crowd more closely.

"Men again on the march! What can this mean?"

Her haughty face hardened.

"Can this be more of the mad work of that insane young visionary, Stephen Mowbray? If he has been responsible for this assault on the authority and dignity of the Matriarchy, not even his position as hereditary heir of the Power Company shall save him."

Eyes flashing angrily, she strode the length of the immense apartment.

"Treason among the lower classes we can curb," she mused, aloud.

Her firm lips parted in a grim smile.

"We have learned how to handle them. The Telemnon advises us of their plans before these have been

seriously developed. The Penal Company seeks out their leaders. Next day, there are men missing from the ranks of the misguided workers and new faces in our mines or quarries."

She nodded approvingly.

"We can care for them, but treason in the highest caste, fostered by the head of the most powerful of all our companies, is a different matter."

She had forgotten the rabble. The Amazons would deal with them swiftly and efficiently, but Mowbray presented a more difficult problem.

"There is only one way in which he can be handled," she concluded, after a pause. "He must be married immediately. Under the law, he will cease to direct the Power Company and his wife will force him to assume his duties in the home."

Her brow cleared.

"That is the solution. I shall have the Council exert pressure on him at once. We shall marry him to a strong-willed woman and she will put an end to his day-dreaming treason."

Dismissing the subject as settled satisfactorily, she signaled for her radiomotor and raced above the gigantic city toward the Food Depot, from which General Bullvers had elected to direct the Amazons in their resistance to the mob.

CHAPTER II

THE brutish rabble spat its helpless rage at the Amazons, as it milled before the silent, menacing ranks of the hereditary women national police. Not for them the mean, degrading work of catching criminals and punishing them. For this despised labor the Penal Company existed, a company comprising a strange male caste, esteemed little above the mob which now menaced the Food Company depots. Theirs the duty of regulating the operation of the human material in the vast industrial enterprises, dealing with unrest by swift extra-legal tribunals, crushing rebellion when it raised its head at widespread intervals. In the old republic, their nobler counterpart might have been the Regular Army, long since swept aside, with all other trappings of militarism, by the sternly pacific Matriarchy.

Recruited from the lowest caste in the great industrial state, the mob lacked leaders, a purpose, and weapons. Conspicuous in their magnificent uniforms of purple and gold, the women police maintained a watchful double line in front of batteries of Death Ray artillery. Behind these were massed the Sleep Ray tubes, sent to the rear when their effect, for the first time in all history, had failed to overwhelm the crowd.

"Disperse!" commanded General Bullvers, her command carried far and wide by tone-magnifying instruments.

The mass voice of the half-brutes in the streets was borne to Matriarch Victoria Arston, standing beside the Amazonian commander on the towering Food Company depot. On either side of them were grouped distinguished women of the Matriarchy, each hereditary master of a huge corporation embraced in the United Companies, successor to the United States of America. Slightly more removed were several young men, maintaining a modest distance from the arrogant mistresses of the new state. Reared in an atmosphere of seclusion from life's practical affairs, the high-caste youths were

horrified, yet fascinated, by the unusual spectacle of brute violence in the street.

"Teach the dogs a lesson!" screamed Rupert Hare, head of the minor Animal Industries Company, one of the few unmarried men permitted a seat in the Supreme Council of the Matriarchy.

The group of young men drew away from him, terrified by his violence.

"Give them weapons and they would teach us one," declared one of them, facing Hare resolutely.

"More treason!" the latter sneered. "We would permit it from no other except Stephen Mowbray, head of the gigantic Power Company."

"Is it treason to bemoan the emasculation of a nation?" Mowbray demanded, coldly.

"Bah! You have read history. The women of America became its masters because men grew so soft they were incapable of maintaining themselves or the government."

Stephen did not answer. Hare spoke bitter truth.

"Women have conducted our affairs with greater success," the latter continued, with pompous insistence. "Never was a nation so prosperous, its people so sure of creature comforts, the country so free from the desolation of war."

"Nor so dead in spirit and in soul," replied Mowbray, his eyes kindling. "America, once the great experimenter, the daring pioneer in human progress, has produced not one new idea in generations."

Others among the young, unmarried aristocrats shrank away from him, startled by his bold words and fearing stern rebuke from the Matriarch.

"What more need we discover?" jibed Hare. "What we have is sufficient for the grandest industrial civilization the world ever has known. Only a fool would tempt fate by prying deeper into mysteries that might lead to destruction."

"A coward doctrine!" ejaculated Stephen.

"It satisfies the women who control America," the other laughed, shrilly.

"What of it? Need men accept it? The sacred duty of America's women is to take the seed of masculine achievement, cradle it and nurture it until it becomes the master of tomorrow's destiny. Ours is the duty to create and, if necessary, to die in order that the race may live and progress."

The mob had rolled slowly, uncertainly up to the waiting line of Amazons. General Bullvers' voice, magnified into a menacing note, again swept over it.

"Disperse!"

The growl of the sullen throng was her only answer. Again she called a warning. The van of the mob shambled forward, rude weapons leaping forth from the welter of bodies. One of the purple and gold forms staggered and fell.

"Fire!" she thundered.

The Amazonian front was outlined with hissing flame. Howls of rage and fear swept up from the crowded street to the ears of the nervous observers. Almost in an instant, the street was strewn with still forms and the mob was fleeing in panic.

"It is always thus," Matriarch Arston explained to General K'ung Fu, who had appeared unheralded on the depot roof. "They are helpless, yet they riot. Oh, you men—"

She shrugged her shoulders haughtily.

"In your brute rage, you never forget—and you never learn."

THE soldier-diplomat, whose victorious legions had swept in the van of his Emperor's armies over three continents, gazed down upon the panic with incredulous eyes.

"Are those really men?" he asked. "Driven like sheep by a handful of women policewomen?"

"You are in error," she replied, coldly. "Our Amazons are not policewomen. They comprise a special caste of women executives, dedicated to the task of ruling and controlling the male workers of the Matriarchy."

He turned his eyes slowly from her to the street, rapidly being vacated by all save the still forms on the pavement.

"Have your men utterly forgotten how to fight?" he asked, after a pregnant pause.

She shook her head regretfully.

"We have not yet succeeded in breeding that primitive, lustful impulse out of them, any more than we have abolished it among the males in animals, but we allow them no weapons and this renders them impotent."

"They knew, then, they would be helpless before your Amazons when they marched here?"

"Of course. The Amazons always dominate them."

"Your men are not wholly past redemption," he commented, coolly, "if they dare revolt under such circumstances."

Flaming anger shone in the Matriarch's eyes, but her attention momentarily was directed elsewhere as Stephen Mowbray pressed her little group of executives and fawners upon the mighty. She laid a commanding hand on the young man's arm.

"You have seen!" she exclaimed menacingly, nodding downward toward the street, where squads of the low-caste Penal Company workers already were at work removing the dead and wounded. Stephen bowed, his troubled eyes searching her stern countenance.

"Let it be a lesson!" she continued, grimly. "The Matriarchy may forgive childish day-dreaming in an immature young man, unversed in the practical affairs of life. It will not forgive more than that!"

"It is damnable!" he replied, hotly.

"Such intemperate language is improper in a gently reared young man," she reproved. "What do you mean?"

"This wholesale emasculation of an entire nation. What will you do for soldiers when a crisis arises, demanding the summoning of troops for the defense of America?"

"In the Amazons, we have all the force America ever will need."

"Policewomen!" he answered, contemptuously. "When have nations ever relied on police officers to defend their shores and independence?"

"Neither they nor any others ever shall have need to answer a call to arms," she replied, furiously. "War! Struggle! Battle! Men think of nothing else! It has needed this Matriarchy to prove that a great nation can grow greater without these things."

"It was struggle, battle, and war that gave to our caste the nation with which to make this experiment," he replied, pointedly.

Anger overswept her haughty face.

"Be warned, Stephen! The Council knows of your

treasonable thoughts. You can hide nothing from the Telemnon. We have been patient, because you are of the highest caste, but you have presumed too much on its patience."

She paused, her cold eyes fixed on his stern face and continued menacingly.

"If I hear more of such utterances, I shall see that you are disciplined, just as that mob of men has been taught obedience. Despite your high rank, it will go as hard with you as with the misguided leaders of those rebels."

He met threats with chill defiance.

"By what right do you menace the master of the Power Company?" he demanded haughtily. "I am as noble as the Matriarch and answerable to none except the Supreme Council."

She gazed amazed into his fearless eyes.

"I have been patient with the plodding incapacity of this government," he continued, "but now, in my turn, I warn that patience has ceased to be a virtue."

He turned to the Mongolian ambassador, who had been a silent but interested spectator of their duel of wills.

"Tell your Emperor," he said, sternly, "that you have seen the men of America still have the will to fight. He may find that fact—interesting."

"Remember, Eminent Matriarch," he continued, swinging around to Arston, "this time they were helpless because they were unarmed. The next time your Amazons face them, they may have both the will and the means to fight."

With a proud inclination of his head that included the diplomat, he strode to his radiomotor.

"There goes a man!" thought K'ung Fu, stroking his heavy chin thoughtfully. "The first and only one I have met in America."

He checked his step as he half started to follow the daring young rebel, then turned diplomatically in another direction. The Matriarch, accompanied by a large and haughty suite, was entering her airmotor. Others of the aristocratic throng, which had witnessed the rout of the mob, also were departing. The Mongolian diplomat paced thoughtfully to his own machine and was whirled away.

THE Matriarch, accompanied by Meering, hereditary mistress of the gigantic steel company, proceeded to the latter's palace. She paused a moment to talk with the powerful autocrat before entering into the dwelling. When she entered the gigantic reception room, her hard eyes scornfully swept the gathering crowd—younger sons of the ruling caste, not yet commanded to marry, daughters of the all-power rulers of the companies, women of secondary estate seeking recognition or power, and their husbands craving social triumphs. Her face was cloudy as she continued into an inner chamber. The gay babble of the crowd, stilled under her bitter gaze, again rose like a whispering gale.

"Where is Fordyce?" she demanded.

"She is sitting at one of my cities, judging a group of insolent workers," Meering replied. "Learning how to discipline these low-castes is part of her training. I advised having them thrashed and sent to the quarries for a sufficient time to teach them good behavior."

"Men, of course?"

The steel mistress nodded.

"I don't know what's coming over the country," the ruler of the United Companies declared irritably. "After generations of peace and orderly management of American affairs, we seem to have a plague of dissatisfaction and unrest among our men workers."

"We must make an example of their leaders," Meer-ing replied sternly.

"Granted, but every loss of labor is deplorable. These muscle-bulking, slow-thinking half-brutes could be dangerous, if they knew their power."

"We need not worry. The Amazons have the situation well in hand."

"These troubled times impose a heavy responsibility upon me," the Matriarch complained. "Our younger generation of women lack iron."

"Fordyce does not."

"She is an exception. The air is poisoned by platitudes and absurdities. 'Men's rights.' What did they ever do with rights, except prostitute them to destructive-ends? War! Conquest! Plunder! Politics! Destructive business competition! Those were the net results. Whatever else may be said in criticism of our rule, it must be admitted we have abolished these economic crimes."

"Why permit criticism? Our foremothers knew how to curb it," said Meer-ing.

"It is not that which troubles me. Quarries, forests, sewers and mines remain to swallow up mouthers. The graver problem is the seeming inability of women in our own caste to cope with other issues and also the gradual intrusion of men into the Supreme Council, weakening it to an extent that is potentially calamitous."

"You refer to Mowbray, Hare and Harmon?"

"Yes. Mowbray, a day-dreaming visionary, Hare half-mad but devoted to the Matriarchy, Harmon an iron-jawed reversion to masculine type, hiding contempt for us under a thin veneer of insufferable politeness."

"We need only endure them as long as we will," Meer-ing replied, with an oblique glance.

"Assassination will not cure our disease. There is more need of a surgeon's knife. Sooner or later, we shall have to operate on the body politic, not even sparing our own caste, or this cancer will spread until it menaces the life of the State."

Fordyce Meer-ing brushed aside the hangings with imperious hand.

"Did you conclude your work in the Steel Company court?" her mother asked.

"Yes. I sent three thousand to the quarries and the others to the mines."

"Will the lesson suffice?"

"No."

Her reply was arrogantly laconic.

"Quarries and mines both are reeking with rebellion."

"Just as I said," the Matriarch declared, her eyes approving the stern young autocrat. "What is to be done?"

"Deport them."

Her voice was coldly incisive.

"Europe is half-desolate, following the Mongolian conquest. With the Emperor's consent, we can colonize it with the discontented, sending such of their women as wish to follow. I know a number I would like to see summarily deported. Not only will we get rid of these elements but we also may build up a defense against the Oriental menace."

"A brilliant proposal," Arston agreed. "I shall have

it considered at the next meeting of the Council. I came here, however, to discuss another matter. When are you to marry Stephen Mowbray?"

"I don't know that I care to marry him at all," the younger autocrat replied, indifferently. "He is handsome enough and it would be a good stroke to unite the Steel and Power Companies but, to be candid, I'm not certain I want a man like him in my house."

"What's the matter?" her mother demanded, in alarm. "Has he been involved in anything scandalous?"

"If he had, I do not think I should be troubled particularly," Fordyce replied, yawning. "I am not a prude. However, he entertains ideas it might be annoying for me to educate out of him."

She crossed one masterful leg above the other.

"There are many things more interesting to me than driving stupid ideas out of a husband's head. He has his full share of silly masculine stubbornness and while I have a certain affection for him as an old playmate, I don't believe I should care to spend my life converting him to sanity."

The Matriarch laughed boisterously.

"If I had a hundred women like you in our caste, Fordyce, I would ride rough-shod over all the Mowbrays of this mad age."

"Give me the Amazons for a year and I will guarantee to stamp out rebellion."

"And some hundreds of thousands of workers at the same time."

"Well, what of it?"

She rose to her slim height and faced the ruler arrogantly.

"What are a million lives, as compared with the preservation of the State?" she asked, haughtily. "I'm weary of dilly-dallying and truckling to treason, this refusal to face facts and deal with them vigorously."

She towered over the Matriarch.

"Will you give me the Amazons for a year?"

The older woman shook her head.

"You know I can't take them from General Bullvers. She is hereditary ruler of the corps. I question whether they would obey any one else."

With a gesture of impatience, the young patrician turned to go.

"One moment, Fordyce. You have not said when you intended marrying Mowbray."

"Never, if I consult my own inclination," she replied, brusquely. "However, you and mother suit yourselves. I'll marry him, if you insist, but—"

A sinister note crept into her cold voice.

"You both must agree, in advance, to support me if he appeals against my—discipline."

CHAPTER III

P RONE on the withered grass of an isolated mountain plateau, Mowbray rapidly operated the dials of a small machine. After a few moments, he smiled with satisfaction.

"Progress, which died with the old republic, is coming back to America again," he mused aloud. "How Bullvers was amazed when her Sleep Rays failed to overwhelm the mob, forcing her to employ the Death Rays."

He wrinkled his brows in thought.

"She will be more surprised when she finds the Death Rays useless against my militia. This little machine was

sufficient to nullify her less deadly weapon. I might have immunized the mob against her stronger arm, but it would not have been wise. The salvation of America is not to be found in the mob. Change must proceed by orderly processes or we will find ourselves in social chaos."

He smiled affectionately as his fingers pressed a button on the little machine, which set up a thin, subdued hum.

"In you," he said, apostrophizing the mechanism, "we have found means to fog the lighter radionic impulses, creating a zone of counter-influence to the ether-borne waves which not only renders the Sleep Ray inoperative, but also produces a condition of disturbance which makes the Televis and Telemnon useless. But for you, I could not meet my captains here in secrecy and with assurance of privacy."

He patted the machine whimsically.

"Thanks to you, I also can talk aloud to myself when it seems I cannot longer keep my thoughts to myself."

"You are our first contribution to the new America that is to be. The next will be the great war machines now under construction in our secret arsenals which you protect from the Matriarchy's spies. Mongolia may believe America is asleep and defenseless, but we shall have another story to tell the great Emperor when he arrives."

He trained a portable Etherscope on a group of quarry workers in the distance. In this instrument, the ancient glass lenses were replaced by a refracting medium of concentrically-whirling colorless gas, activated by radioactive units fixed in the metal shell which set up a gravitational field around which the gas molecules revolved. The refracting power could be determined by the volume of energy directed to the control units. The Etherscope had a vision range much greater than that of the ancient telescope and the image also was far more clear. It now revealed to his eye thousands of men, all political suspects, condemned to the exhausting and degrading task of hewing out stones with rude hand tools under the watchful direction of guards clad in the somber black of the Penal Company.

"Poor victims of tyranny," he mused. "Their only crime is an unuttered, perhaps even a half-formed mental protest against the soul-deadening materialism of an age that has made both men and women mere slaves to the machine. All betrayed to harsh overlords by the treacherous Telemnon."

He shifted the Etherscope to a broad field, on which gigantic machines were reaping an early harvest.

"Here is one of our greatest hopes for the future. Agriculture is so essentially individualistic and the labor so heavy and exacting, that men have had to be retained for all but the highest executive positions in the Farm Company. They still fight Nature to win food, even in America."

He shook his head doubtfully.

"At times, I wonder whether we can depend upon them. The farmers are a special caste, upon which the Matriarchy has showered more favors than upon any other of the lower elements in the country. These men might be reluctant to risk the loss of their special privileges."

A small radiomotor dropped lightly on the sere grass and from it sprang a girl, her beautiful face alight with the charm of high intelligence. He leaped to his feet.

"Ardis Moore! I had not expected you so soon."

"I hoped you would be here early and came as soon as I was given release by the Mistress of my Community House."

He drew her to him.

"I hear gossip," she continued, "that the Matriarch had decreed your immediate marriage."

"She had no authority for such statements," he replied, his eyes flashing. "She is spreading these reports to render me ridiculous among my followers, but even she will not dare attempt coercion."

"I am not so certain. It would not be the first time a young man of your caste, who entertained ideas inconvenient for the Matriarchy, had been summarily removed from public affairs by marriage to a strong-willed woman of his own estate."

"It is damnable! Eager, ambitious young men parceled out in such high-handed manner—married to this woman or that woman as the Matriarchy deems expedient."

"It is the custom," she replied, smiling sadly.

"Custom or no custom," he answered, hotly, "I shall have no wife but you, Ardis."

A spasm of pain contorted her beautiful face.

"That can never be. The matron of my Community House informed me today I have been placed in the proscribed caste. I never can become either wife or mother."

"Proscribed!" he ejaculated, in amazement.

She nodded, her face suddenly grown haggard.

"The Telemnon must have revealed our secret. I was instructed that as soon as discharged from the surgery of my own caste, I am to enter the School for Junior Executives."

He drew her to him in a fierce embrace.

"I shall not permit it!"

"What can you do?" she replied, sadly. "You—a man?"

"I shall appeal to the Matriarch. She shall know I love you—"

"That would make her the more determined to see the decree carried out. She has arranged a marriage for you with Fordyce Meering—"

"The daughter of the Mistress of the Steel Company?"

"Yes," she answered, with pitiful composure. "Your ruling caste will not permit you to marry outside its own sacred bounds."

Abruptly, she thrust him away, her strong hands pressed against his chest.

"This must be our last meeting."

"Never!"

"Marriage is forbidden for me," she replied, firmly. "Where I may not wed, it is unjust to you to play at love-making. You must think of your future and of the woman who is to make you her husband."

HE strove to interrupt, but she would not heed his protests.

"For me, there is only the dreadful prospect of a loveless, hopeless life as a cog in the government's gigantic executive machine. For you, there opens up a great social career as help-mate of the woman who, through marriage with you, will dominate two of the mightiest of the Companies. Dearest, do not add to the burden of my grief. Blind my eyes as I might with love, I always have known. I could not hope to claim a man of the highest caste. Now comes the end of our pitiful

little dream of happiness. I followed you here today to say a last, sad farewell."

He grasped her wrists determinedly.

"Neither the Matriarch nor the Council can force me to marry Fordyce Meering or any one else except you."

She shook her head gently.

"You know less than I of the terrible power of the government. You were not reared in a Community House from the hour of birth, never knowing your father, bearing your mother's name and drawing in, with her milk, the stern doctrines of the Matriarchy. You did not go to the women's schools, where we were taught the lessons of our sex, prepared for our masterful part in the world, trained to take our places, when ordered, in whatever branch of directive energy to which we might be assigned."

She brushed her hand across her brow, as though to steady her thoughts.

"Stephen, you have no conception of the ordered ruthlessness of the Matriarchy, or you would not speak of defying it."

He crushed her to him with arms stronger than her own.

"My defiance will not be the protest of one helpless man," he declared, exultantly. "Have you heard of the militia I am organizing?"

"Who has not?" she smiled, lovingly tolerant. "They laugh at you in the Women's Community Houses for your 'toy soldiers' and your 'playboy campaigns.'"

"My soldiers are not toys," he replied.

The grim purpose in his voice brought her face up from his breast. She searched his face apprehensively.

"Down there, where those quarrymen are toiling, I have friends," he continued. "Yonder, among those farmers, I have emissaries. You cannot enter a mine, a factory, a machinery depot that you will not find my agents. In the Men's Community Houses, I have representatives, who wink at the departure of the Companions for stealthy drill grounds, deep down in the city catacombs, in the silence of mountain forests and in isolated highland valleys, where every man is committed to my cause."

"You play with fire," she cried, in alarm. "What if the Council were to learn what you are doing?"

"Who do you think it was that fogged the Telemon so no one, not even General Bullvers, now can read the public mind with certainty?"

"Was that really your work?" she exclaimed, amazed.

"Who else could it be?" he laughed. "This is the first of several surprises I have for the government."

"It is all fearfully dangerous," she replied, shaking her head. "If they learn of this, they will sweep you with the Death Ray."

He laughed derisively.

"I have stood an hour in its full force and never even felt a tingle of the skin. Inventive genius all but died under the Matriarchy but we have revived it. I have weapons of which even the martial Mongolian does not dream. This revolt of mine is no sudden thing. It is the culmination of masculine plots reaching back for generations. When the Companions answer my call, the world will be amazed by their tools of war."

He gazed down tenderly into her beautiful face.

"Can you love a rebel, dearest? Can you give yourself to one who would smash this horrible travesty on government, which brutalizes even its masters and which

at this hour awaits, without attempt at defense, invasion by Mongolia?"

"Is that certain, Stephen, or only hearsay?"

"It is a certainty," he replied, soberly. "I have spies at the court of the Emperor in Thither Mongolia and I know he is at this moment assembling a tremendous fleet of gigantic warmotors to raid our country."

"But the Council must know! Why is it not preparing for defense?"

"To whom would they turn?" he demanded.

"The Amazons."

"Policewomen! What does their commander, Bullvers, know of fighting. For generations, they have done nothing but maintain law and order and punish the enemies of government."

"Women can fight," she replied, spiritedly. "Provided, of course, that fighting really is necessary."

"When have they had to war?" he demanded, laughing. "The republic was established by men, who battled with Washington, Grant, Pershing and a thousand other commanders. When the Matriarchy was established, this nation so completely dominated the world none dared challenge it. That was the state of affairs until this Mongolian conqueror burst from Asia to sweep three continents. It needs only the defeat of America to make him the first unchallenged master of earth."

"He may be a great soldier," she argued, "but he will not risk the collapse of highly industrialized America. That would mean economic ruin and would give him a barren victory."

"Are you so sure of that, my little philosopher?" he teased.

His bantering tone brought surprise to her eyes. Never before had she heard any man speak in this wise to a woman. He grew serious.

"Ardis, men esteem some things higher than peace, security, and comfort. One is fame—the red fame of conquest, of domination, of power. For power and also, perhaps, an imperishable page in history, an Alexander conquered the known world, a Cæsar crossed the Rubicon, a Napoleon set up and crashed down an empire. Another of these primal urges is the lust for the continued progress of the race which inspired Washington to establish this republic and Lincoln to make it free."

"What are these things, as compared with safety, comfort, even life itself, sacrificed in accomplishing the achievements you mention?" she protested, in horror.

"Everything. That is where your sex and mine differ. I do not mean the poor masculine weaklings this Matriarchy has developed by inbreeding among its own kind, or the stern women it has elevated to power in the Companies, but the men and women of the early republic, who sacrificed greatly that it might come into being and continued sacrificing that it might live and progress."

She listened in silence, inspired by his enthusiasm but amazed by the strange, new doctrines he enunciated.

"Men must adventure and die that the race may go forward," he continued. "Women must safeguard all that courage and sacrifice have won. Theirs it is to have, to hold and to transmit to the next generation, cradled in their arms and learning from their lips the lessons of patriotism and noble thinking."

"It is a wonderful picture, but an impossible one."

"Ardis," he said, solemnly, "we have come to the end of unchanging days for America. Change has been slow, but now it has arrived!"

"Change!" she exclaimed, with a frightened intaking of breath. "Change is a frightful monster, always demanding a toll of life, wealth and happiness. What do you mean?"

"We face the inevitable conflict. The Matriarchy is doomed. If Mongolia wins, the Emperor will degrade its rulers and seize their enormous wealth. If he is to be defeated, my 'toy soldiers' must do it. They will not stop short of a restoration of the republic."

"The Emperor will not invade. He will accept tribute, as he has before."

"Why accept part when we can have all? Ardis, you little know the heart of man. He would rather be first Master of the World than possess all its wealth. To him, the glory infinitely outweighs the gold."

She stared with affrighted eyes into his eager face.

"These things of which you speak are mad," she declared. "Yet, I believe. I see you as the herald of a new day for America. What is my part to be?"

"When the crisis comes—and it will be delayed only a few days—hasten to Malcolm McArthur, custodian of furnishings in the Alpha Community House for Men. He is a trusted friend and will show you a secret hiding place I have prepared for this emergency. Remain there until I come to you."

"And if you do not come?"

"Be guided by Malcolm's advice."

"I shall not need his advice. I shall join you."

"That," he replied, slowly, "will be impossible. I shall have gone on a long, long journey."

Realizing fully the savage fury with which the Matriarchy would pursue him as a defeated rebel, she read the secret meaning in his cryptic statement.

"It will not be impossible for me, sweetheart," she declared. "You will not travel that long road alone."

CHAPTER IV

DUSK was falling as Stephen, his lips still warm from Ardis' kisses, made his way through the business section of the metropolis toward the quarter of the no-caste foreign contact slaves of the United Companies. A heavy cloak drooped from his shoulders and a long-drawn hat concealed his features.

The precarious, narrow balcony he followed was a strangely inefficient survival of a distant era in the life of the great industrial autocracy. It hung along the cliff-like sides of massive factories and consisted of loosely-joined links of communication between adjacent buildings. Other and more rapid means of communication had rendered pedestrian traffic unnecessary, but tradition and customs had preserved the walkway, which had a sinister reputation of nights when, in its convenient shadows, lurked successors of lawless elements that, in earlier days, had preyed on the public under the names of "burglar," "thug," "thief" and "footpad."

By day, these malefactors plied the lowest and vilest trades in the great city, plowing through the polluted waters of mastodonic sewers, performing menial labors in the mammoth Community Houses, executing tasks from which even the foreign contract slaves shrank. Chalk-faced, stoop-shouldered, taciturn, they spoke a patois of their own, turning sullen, debased faces to their harsh task-masters. At night, they sallied forth, veritable vampires of evil, levying forcible tribute on wayfarers and even occasionally looting a rich warehouse.

This caste—for although not officially so designated, it was as distinct and separate from others as those recognized by law—was always at war with the Companies. In it, men were dominant and these snarling enemies of society alone cherished a feeble flame of revolt against the rule of the Matriarchy. From their ranks had arisen fierce leaders who led wild hordes against the Amazons, deluging sections of the city with blood and holding mad revelry over the glazing wreck of vast properties.

In their odd language, a treasure of ancient tradition was preserved. The spirit of the old republic found strange, distorted response in their untamed, individualistic natures. When they rose, a rude banner, fashioned from memory of the starry flag that had been the emblem of the ancient nation, floated defiance to the purple and gold ensign of the Matriarchy.

Mowbray paused at the approach to a gentle slope and peered into the darkened street. Far below ran the escalators, which provided passenger transportation within the city. Outside it, all permitted to travel used anti-gravitational belts for short distances but because these had not been perfected to the point where they could be relied upon for long trips, the radiomotor was employed for this purpose. This limitation on transportation also served the useful purpose of preventing departure of workers from their fixed districts without permission of constituted authorities.

Under the escalators were the moving freight platforms. Huge-muscled men darted in and out among the trains shifting the commodities into warehouses or adding bulky parcels to the never-ending procession. Over the street, from the roof of one building to its fellow on the opposite side, sprang a translucent covering, which excluded cold, rain and snow, but permitted passage of light, heat and the health-promoting ultra-violet rays. At right, its surface was a vast mirror, which flung back mellow radiance into the canyoned thoroughfares from lights concealed in supporting beams.

Sinister forms crept from the gloom and a heavy hand was laid on Stephen's arm. The vampires were abroad. He spoke a password in the patois of the caste and it brought instant respect.

"We did not recognize the Commander," a hoarse voice apologized.

Another man, evilly odorous of the sewers, thrust his way forward. Imperatively motioning his companions to draw back, he whispered in Mowbray's ear.

"Simeon of the Thieves asks orders, Commander. Shall we strike?"

"No. The time has not yet come."

"Will it be soon?"

"It cannot be long delayed. The Mongolian is preparing to invade."

"We are ready."

The thief out-thrust a brawny arm in a gesture of rude eloquence.

"My hand is open. The Commander's will controls it. If he speaks—see, it closes!"

"Many will die if the Emperor comes, for he will bring an army of veterans."

"Better to die fighting than rot in the sewers."

He bent closer.

"Simeon was approached today by a servant of Mallay, Master of the Penal Company."

"Yes?"

Stephen instantly was alert.

"A bribe was offered."

"For what service?" the young man demanded.

"Your assassination as an enemy of the state. Others were to be removed also, without scandal."

Stephen laughed curtly.

"Simeon is certain the man was Mallay's agent?"

"Is there one of his cat-footed devils Simeon does not know?"

"Did the man say who ordered Mallay to strike?"

"Yes. He mentioned the name of Arston."

"The Matriarch! This is grave news. Is it possible she would risk internal revolution on the eve of Mongolian invasion?"

HE soliloquized more to himself than to the ear of the thief, who hung eagerly on his words. When he spoke again, his voice was hard.

"This is one more subject to be discussed at tonight's meeting of the Leaders."

Fury shook his reserve.

"Fools and murderers! Their doom is on their own heads!"

Nodding a preoccupied farewell to the thief leader and his followers, Stephen pressed on with hurried steps deeper into the heart of the quarter reserved for the contract slaves. Factory buildings became less numerous and were interspersed with loathsome no-caste Community Houses. He plunged into a chasin-like court and knocked at a gloomy door. It was opened guardedly and he slipped in, coughing as a medicinal reek filled his lungs.

A Mongolian, upon whom tuberculosis, the scourge of the outcasts, had set its seal, carefully fastened the door and joined him at a table. His face showed wan and pinched in the light—deep hollows in his cheeks and stern lines of pain graven about his mouth testifying to an agony of suffering restrained by indomitable will.

"You sent for me, Drusus?" Mowbray said, inquiringly.

A spasm of coughing shook the other's frame. An exile from his own country, with a price on his head, he had fled across the Pacific for refuge. Speaking the language of the Americas freely, he had adopted the name of "Drusus" and had taken his place among the Mongolian contract slaves. Unfitted for rough and noisome tasks, he had contracted the disease that now wrote the lines of doom on his countenance. Hard-driven by a merciless taskmaster, he had been picked up by Mowbray's order and, under the young patrician's shelter, treated by skilled practitioners, who had halted the hand of death but could not cure the wounds disease had inflicted.

Stephen had surrounded the proud sufferer with simple comforts he could be persuaded to accept and had been repaid by information concerning conditions among the outcasts such as no others, not even the leaders of the thieves, could furnish. "Drusus" was a hidden power among the Mongolian contract slaves and, through them, was in intimate touch with all elements in that vast, appallingly unknown underworld which crawled about the substructure of society in the Matriarchy. Curbing his coughing by an effort, the man began to talk, speaking rapidly lest further attacks interrupt his words.

"The Emperor is prepared at last. He will command the invasion in person. This is to be his last and greatest campaign of conquest."

"Are you certain? This is grave news, if true."

"Drusus" laid a bony hand affectionately on the young man's arm.

"My friend, why waste a noble life in a doomed cause? You cannot stem the tide of destiny. Mongolia will obliterate this government."

"I fear you are a true prophet," Mowbray assented, gravely.

"What is there in it worth fighting for?" the Mongolian proceeded, eagerly. "Even if, by some miracle, you should defeat the Emperor, the Matriarchy would hound you to death as a rebel."

"True again, 'Drusus.' Still, you know the die is cast. I could not draw back if I would and I would not if I could."

"Is it too late to cast aside your own plan for a better one?"

"What do you propose?"

He seemed at loss for an answer.

"As you know," he said, after a pause, "I fled Mongolia because my life was in danger and the Emperor had declared my estates forfeit. The reason I never have told you. In open council, I accused him of cowardice because he refused to throw an army of conquest into America."

He raised a hand to check Stephen's protestations of surprise.

"I did not realize the slow certainty of his mind. I saw only that your nation could not resist a single spirited attack. An empire without an emperor, a despotism of merchant princesses, I knew it would crash under the first assault of veteran troops. I did not realize that Mongolia had taxed its resources so vitally in the European and African campaigns. It could not strike again without imperilling all that had been built up by war."

He rose and replenished the urn, in which pungent drugs burned slowly.

"The Emperor has recalled me," he continued, seating himself. "He offers a place in his council and the return of my estates."

"That is good news for you, 'Drusus.'"

"'Drusus' no longer," replied the Mongolian proudly. "Field Marshal Lee Chang."

Mowbray's brows rose in astonishment. The conquest of Europe had been a chronicle of this man's spectacular victories.

"I see you recognize the name. It is my last pride. However, though I have accepted the estates, I have refused office and return to my own country only to die. One mission I have accepted, at the Emperor's request. He seeks the rich prize of America for a double purpose—to recoup his treasury and to forge the concluding link in a chain of conquests that will carry Mongolia's rule around the world. This forceless Matriarchy is the sole remaining government of the white race. It must fall, that Mongolia's triumph may be complete."

"If he succeeds, Mongolian world rule is certain," Mowbray admitted. "The white race will cease to exist as a dominant people."

"It has ceased to exist," declared Lee, in sonorous tones. "If unmenaced from without, it soon would crash of its own incapacity. The white race has had its day. I speak not of individuals. If men of your lofty spirit dominated America, it still would be the torch-bearer of civilization. The Matriarchy, buying peace at the price of dishonor, stamping out initiative, imprisoning all who

dare oppose its unprogressing rule has made men slaves and women their soulless taskmasters."

The stern pride of the soldier shone for a moment in his deep eyes.

"We, of Mongolia, poor but militant, would not sacrifice our manhood on the altar of commercialism. Few in number after the Great Plague of China, wandering for generations on the desolate plains of Asia, we held true to the high principle to which your forefathers subscribed. Upon us, my friend, has descended the mantle of your Washington and your Lincoln."

His emaciated form was shaken with a spasm of coughing. When he resumed, it was in a calmer tone.

"I spoke of a mission I had accepted. It intimately concerns you. Do not be surprised. The Emperor's mind is omiscient. The Companies will fall and the blood-stained treasure wrung from your decadent manhood and a world's necessities will enrich Mongolia. He seeks a vice-regent to govern this people, in whose fealty he can place trust. He has selected that man."

Lee leaned forward, his keen eyes searching Mowbray's face.

"Who is he?" Stephen demanded.

"Yourself!"

The exile's hand closed commandingly on the other's arm.

"Do not answer hastily. The future welfare of millions may depend upon your decision."

THE young man sat for moments revolving the amazing proposal. Mongolia's victory might not be so foreordained as Lee Chang assumed, but treachery in America, coupled with military incapacity, readily might make the Emperor's triumph both sure and complete. As America's vice-regent, he might launch far-reaching reforms, the operation of which eventually would rescue America from the dire abyss into which the Matriarchy had plunged it. However, when he replied, his voice was stern with resolve.

"I cannot accept. The conflict is inevitable. Upon the issue hangs the mastery of your people or mine. America, substituting servile peace for warlike accomplishment, and gold for steel, had procrastinated for generations. Now, it must face the issue with as much resolution as still remains in its fighting men. A vice-regency, under a shadow monarch of our own race, merely would smother whatever flame of ancient courage yet survives. The fight must be to the finish—your race against mine—and I must stand or fall with my own people."

Lee Chang bowed gravely.

"Your answer was as I had feared and expected. This is our last interview. I envy your youth, strength, even your perils, and they are many. However, I have accepted the Emperor's grace and will return to die in the land of my birth. One last warning. Be prepared. The Emperor moves slowly in preparation but swiftly to battle. You will be at death's grips with him soon."

Stephen was met at the entrance to his palace, on his return from his interview with "Drusus," by a nervous servant, who whispered a message. He paused thoughtfully, weighing the news carefully and then went to a retired chamber where he conversed briefly over the Electrono with several of his lieutenants. Brow now serene, he returned to the reception chamber, where a purple and gold clad Amazon awaited.

"I was instructed to request your immediate attendance

upon the Matriarch," the officer said, bowing haughtily.

"Her word is law," he replied, according to traditional formula.

He paused as they reached his radiomotor, in which he had chosen to make the journey.

"Am I under arrest?" he demanded.

"I was not so instructed," the woman replied, coldly. "General Bullvers, who is in conference with the Matriarch, directed that you be summoned."

Stephen breathed more easily. While he had relied upon the known hesitation of the Council in the face of an emergency, none knew better its instant readiness to sacrifice any individual, however nobly placed, when its members suspected their own security was endangered. The machine rose from the roof and the city fled away like a dream panorama. He could discern the outlines of factory roofs only dimly, because the covering conserved all except a modicum of illumination. The radiomotor alighted on the roof of the Matriarchal Palace, in the Administrative Center of the city. Stephen found her closeted with Bullvers, Councillor Alexander Harmon, one of the few unmarried men in active control of one of the great Companies, and Mallay, Master of the Penal Company. With a haughty gesture, she indicated a chair and studied him coldly for several moments before speaking.

"What are you doing among the lower-caste workers?" she demanded, abruptly.

"Do you ask in the name of the Council?" he replied, boldly.

"Yes."

"Am I on trial?"

She stirred uneasily. Mowbray was another of the dangerous anomalies of the national politico-economic administrations—master of the greatest of all the Companies in a government otherwise dominated by women. In a critical stage of public affairs, it was no simple matter to discipline so powerful an autocrat. While she weighed her answer, Mallay, a rat-faced, nervous little man, shrilled a challenging answer.

"When the Council decides, it will speak in no uncertain tones."

"I am a member of the Council and I need no information on that score," Mowbray replied, scornfully.

The Penal Company head recoiled under his haughty contempt. Stephen shot a stern question at Arston.

"As a man of highest estate, I demand to know why I am questioned."

"The law accords you that right," she admitted, unwillingly.

His boldness daunted her. She also was handicapped by traditional feminine respect for his sex. After all, once he was safely married to Fordyce Meering, there would be an end to his weak, wild adventuring. She continued in a milder tone.

"Is it not sufficient that I ask an explanation? Do you require nobler auditors?"

A slight smile played upon his lips.

"No, Eminent Matriarch, but I demur to one of the Company," with a glance of contempt toward Mallay, "and I also question the reason for this inquisition. However, I am at your service. What would you know?"

His adroit reversing of their positions as accused and accuser had not escaped the notice of Councillor Harmon, the square-jawed satirist, whom failure of the fe-

male line had made Master of the mighty Food Company. A smile of amusement swept his heavy face and brought a flush of annoyance to that of the Matriarch.

"Why are you organizing the workers and educating them in arms?" she demanded, brusquely.

"To defend the state."

"Is there no other motive?"

Her half-closed eyes glittered ominously.

"Not now."

"And later?"

"I am no prophet," he replied, composedly. "I cannot probe the future."

General Bullvers, who had been listening intently, thrust forward a ruddy visage, purpled with anger and the hard effort to control strong emotion.

"Who are these enemies you fear?" she demanded, ironically.

"Mongolia, immediately."

"Ah!"

She heaved a portentous sigh.

"And ultimately?"

Stephen's face paled, but his voice was firm.

"All who endanger the future of our race by debauching its people and squeezing out the last remnant of their manhood."

"Treason!" shrilled Mallay.

"If it is treason to save a people from subjection, I am guilty," Mowbray replied, fearlessly. "What is the Council doing to meet the Mongolian threat? Nothing! Go down, as I have, into the Community Houses of the lower-caste workers and see hordes of men without courage and women without hope. There, find the answer if you can to the problem of resisting the great Emperor when he pours his veterans out upon the soil of America."

Arston, her eyes sparkling with rage, replied:

"We shall meet him, if he comes, as we have in the past. He is no fool. He will not risk the loss of tribute to gratify a mad lust for conquest."

A HARDER note crept into her warning voice.

"Be careful, Stephen Mowbray. The Council can deal harshly even with traitors of the highest caste and your sex will not make it too merciful."

He brushed aside the personal threat contemptuously.

"The Emperor will not be content with part when he can take all. You measure his ambition with your own golden yardstick. Think you, if he intended accepting tribute he would, at this very moment, be gathering the greatest fleet of warmotors the world ever has known in Thibet with such secrecy that your secret agents have heard no word of his plans?"

Arston shrank back, as though from a physical blow. Her face paled, but Harmon, his heavy face alight with interest, leaned forward in his chair.

"How do you know this?" he demanded.

"Because I have not been blinded by insane belief in the impossibility of war and have men in Mongolia looking for the thing you refuse to recognize. Tomorrow's sun may be darkened by the Emperor's war fleet. Where will you find soldiers to meet his trained veterans? Will you find them in the Amazons?"

The angry corps commander was silent under the lash of his scorn.

"Your sole salvation is in the despised workers, to whom I have tried to teach a little of the almost forgotten art of war. It may be they are a broken reed, but it

is the only one upon which we all can lean in an emergency."

He turned his back upon the silent group and strode from the apartment.

"Stop him!" shrilled Mallay, starting from his chair.

"No!" thundered Harmon. "Would you see warehouses and factories in flames? He speaks with the air of one backed by no uncertain force."

"Harmon is right," the Matriarch declared, uncertainly. "We must take this matter before the Council."

"Dare we try him?" Harmon asked, contemptuously.

"Be patient. We may find use for these workers he has trained if the Emperor actually has gone mad and decided to invade America."

"You attach too much importance to his bluster," Bullvers protested.

The Councillor's tone was bitterly ironic as he replied.

"If you fight no better than you reason, general, you will need more than Mowbray's levies."

As Stephen's radiomotor rose from the Matriarchal Palace roof, he perceived many small machines and larger passenger carriers swinging, bat-like, over the building. The air was thick with them and they moved in perfect order. He flashed a signal, recognizing them as part of his secret aerial militia and a tiny flyer cut in under his own. Simeon Shackelford, leader of the Thieves, swarmed up a ladder into the cabin of the Commander's car.

"We were marking time an hour, as you directed," he declared. "Had you not appeared, we should have invaded the palace. Men have assembled at all the concentration points and are awaiting orders."

Stephen briefly detailed the session through which he had passed.

"Disperse at once," he commanded. "The Council will summon me for trial tomorrow. Let the commands gather quietly and, if no order comes from me at once, order them to move on its chamber."

"Why delay?" urged Simeon. "We are ready now. Let us seize the Matriarch and defy the Council."

"We must give them one last opportunity to prove their ability to cope with the situation. If they will strike hands with us in repelling Mongolia and consent to national reforms following victory, we can afford to be magnanimous. If they refuse, our plans are made."

"You waste time," Simeon protested. "Assassination has not been unknown, even in the Chamber. Strike now!"

"Not tonight. Our soldiers will be filled with renewed determination if they know peaceful advances by their leaders have been rejected."

"Your advice is best," the leader of the Thieves conceded.

He cried a voiceless order into the Electrono and radiomotors swung off in every direction, carrying the militiamen to their respective quarters. In the early morning hours, while Stephen still was in conference with his Captains, an imperative message came, commanding him to appear before the Council.

"Fate is moving with hasty strides," cried a worker of distant Italian parentage, his mobile face lighting with stern enthusiasm.

Stephen moved to a window opening out upon the east. His palace stood on a hill outside the city and the chill breath of dawn was borne on slanting lances of light to his tired face. Eyes upon the distant horizon, growing

bright with the first hint of sunlight, he studied the problem before him. Would this day be the herald of a new era for America, or would it witness destruction of another futile rebellion against these giants of commercialism, against whom he had unsheathed his sword?

With a sigh, he turned to issue final orders to his lieutenants, who hastened to their radiomotors, bearing commands that might turn the city into a shambles before nightfall.

CHAPTER V

STEPHEN paused at the door of the Council Chamber and listened with amazement to the tumult within. This magnificent edifice, in which the Mistresses of the Companies long had met to decide the policies of the nation, always had been a place of dread, in secret, even to the patricians who foregathered there, but never had it been a house of brawling. Its sign had been the sign of fear. So haughtily confident, in fact, was the ruling caste that lesser estates never would dare invade its sinister precincts, that no sentinels ever had guarded its single entrance. Now, for the first time, clamorous voices battled for recognition and verbal riot held sway within its magnificent confines.

"Treason!" shrilled a voice he recognized as that of Hare, the unwedded Master of the Animal Industries Company.

In the hush that followed, he heard the Matriarch's stern voice.

"Treason, undoubtedly. We are agreed. The question now is how we shall meet it."

Again the din burst forth, drowning her voice. Mowbray strode into the chamber. Women Councillors, magnificently clad in the hereditary robes of their high office, had clambered on seats and desks and were gesticulating into the reddened faces of companions, who shouted in a vain effort to make themselves heard. Obviously, the debate had been long sustained and had brought no decision to the divided and uncertain Council. Arston recognized Stephen and beat heavily with her gavel. The noise rose above babble of voices and the disputants, following the direction of her gaze, saw the young Commander. Silence fell upon the assembly.

"There's the arch-criminal!" screamed Hare, pointing a trembling finger. "Arrest him!"

Unsupported by a single attendant, Stephen strode to the foot of the Matriarchal throne, the gorgeously robed Councillors parting before him, and bowed gravely.

"You sent for me. I have come."

Harmon forced Hare into a seat as Mallay raced into the Chamber.

"The masses are marching," the Prison Master screamed. "An army of the low dogs is massed at the outer gates of the Chamber grounds."

Arston hurled a bitter question at the silent young Commander.

"You ordered these men to mass here?"

"I did."

His laconic reply brought a dozen Councillors to their feet, shouting questions and denunciation. She silenced them with her gavel.

"By whose authority did you issue these orders?" she demanded.

"My own."

"Traitor!" again screamed Hare.

Meering thrust herself to the forefront of the throng. "Do you place your authority above that of the Council?" she demanded.

"It remains to be seen whether they were not in accord with its best judgment."

"This is no time for quibbling," the Matriarch declared, sternly. "The Council speaks its own will in its own way and in its own time. Order these low-castes to disperse."

Stephen smiled into her flushed face.

"Is that all you desire of me?"

"That is all I require now."

"I will go then."

The richly garbed throng parted less readily before him, uncertain whether to detain him or permit him to depart. Harmon laid a heavy hand on his arm.

"Why did you come here?" the man demanded.

"I was summoned in the name of the Council."

"This is child's play," the burly Food Company Master declared, turning to his colleagues. "Who summoned Councillor Mowbray?"

"I did," Arston declared.

"Why?"

"That he might give an accounting of his subversive activities among the lower classes."

"Let him speak then," Harmon urged, grimly. "I do not believe his rabble will attack this Chamber without his orders."

"What would you know?" the Commander asked, addressing the burly Councillor.

"I know all I consider necessary about you and your plans," he replied, shrugging his shoulders. "The Matriarch is curious."

Her face flushed with anger; the latter again interrogated the intrepid young patrician.

"What have you to say in your own defense?"

"Of what do I stand charged?"

"Treason to the state."

"Treason is a broad accusation. I do not recognize that I need to defend myself from such a charge."

"And I," she replied, with fierce malevolence, "refuse longer to bandy words with one who has betrayed his own caste. It is my judgment that you die as a traitor, under torture."

Mallay, his vulpine face alight with eager malice, laid a clutching hand on Mowbray's wrist. With a contemptuous gesture, the latter knocked the Prison Master sprawling, then sprang through the richly robed Councillors and paused at the head of the magnificent stairway leading from the Chamber to the splendid park in which the dread building was situated. A solid body of purple and gold clad Amazons was advancing on the double-quick toward Phillip's militiamen, who had broken through the gates of the Chamber ground and were marching upon the building. Harmon had followed Mowbray from the structure and the latter now turned to the heavy-faced Councillor.

"Must this slaughter be precipitated?" he entreated, indicating the nearing columns.

"Yes! A thousand times yes!" screamed Mallay, cowering behind Harmon's sturdy form.

General Bullvers broke through the door and smiled with satisfaction as she noted the orderly advance of the Amazons.

"Thus, young sir," she declared triumphantly, "will end another abortive rebellion."

Stephen had been recognized by a keen-eyed leader in his own forces and at the officer's command, the militia broke into a quick-step, rapidly narrowing the distance between it and the Amazons, who also converged on the Chamber entrance. Harmon suddenly flung up his hand and knocked a weapon from the hand of Hare, who had slunk through the gathering crowd of gorgeously robed autocrats until he had gained a position behind the pre-occupied young leader. As the half-mad young aristocrat recoiled, the Food Company Master studied Phillip with evidence of lively amazement.

"Are you immune to the Death Ray?" he demanded.

"Yes," Mowbray replied, grimly. "So are those militiamen. The Amazons are doomed, if they clash with my soldiers."

He heard a strangled cry of incredulous surprise from the hereditary commander of the corps.

"There still is time to avert a massacre of your troops, general," he continued, sternly.

HE paused for a reply. From both advancing columns abruptly broke a startled rout. He glanced westward, in which direction all eyes were bent. A squadron of crimson radiomotors was swiftly approaching. Over the foremost floated a banner readily identifiable, even before the design upon it was visible. Behind the first squadron came two others and then an endless fleet of racing warships, heading purposefully toward the east. Grim, relentless, they all too evidently typified a power arrogantly confident of itself and as arrogantly contemptuous of opposition. As the leading machine swept past, the flaunting flap was revealed. It bore a gleaming dragon on a blood-red ground.

"Mongolia!" screamed Hare, hysterically.

He turned to the silent mob of patricians, eyes rolling, mouth pendulous in panic dismay.

"Mongolia, certainly," Harmon assented, heavily. "What will you do now, Councillors?"

None answered. Stephen turned quietly to Arston.

"What now, Eminent Matriarch."

"Invasion from Mongolia!" she exclaimed. "Impossible! There must be some mistake!"

Harmon, his harsh face stern with foreboding, answered contemptuously.

"The mistake is ours. We sent incompetents to the court of the most dangerous enemy America ever has faced."

With characteristic directness, he turned to Mowbray.

"Can we rely on you and your militia?"

"I will make common cause with any one against the Emperor?"

"Can you control your men?"

"Better, perhaps, than you can control the Amazons. They knew this emergency was inevitable and have been trained for it."

Unwilling admiration erased the habitual ironic smile from Harmon's lips.

"You're bigger than I had thought, Mowbray—bigger, perhaps, than all the Council combined."

He turned commandingly to Bullvers.

"Disperse your troops. Mowbray will order his soldiers to retire. We are facing the gravest crisis in the history of the United Companies."

Ignoring the panic-stricken Councillors, he led the general, Stephen and Hare to the offices of the Food Company.

"Whatever our individual opinions on internal affairs," he declared, sternly eyeing his silent auditors, "it is our common duty to join for the defense of the country against a foreign foe. We will pour out treasure unstintedly to procure peace but must prepare immediately for war. Our military force is embraced in the Amazons Corps. Mowbray, what force can you put in the field?"

"I will place a soldier in the field for every one the Amazons can produce and a reserve of as many more."

Harmon's grim face lighted with surprise and admiration. With an ironic smile, he glanced toward Bullvers, whose florid countenance was set in an expression of amaze and gloom.

"This nut would have been harder to crack than you had anticipated, general," he said, with grim humor. "Are your troops adequately armed?"

"So adequately that they could wipe out the entire Amazon Corps without the loss of a man," Mowbray replied, grimly.

"You have devised a new war weapon?" Bullvers declared, incredulously.

The young Commander nodded, a half-smile on his lips.

"What is it?" the general demanded.

"Perhaps, even though time is pressing, it will be well to advise you of its general purposes, so you will know how readily it can be introduced to the Amazons. If they are to join with us in resisting Mongolia, I have no secrets from them or from you, general."

The half-incredulous, half-admiring smile again swept Harmon's heavy face and he leaned forward eagerly as Mowbray continued.

"It will be necessary to briefly sketch the present most efficient arm to make our improvement apparent. The death ray, as you well know, is a relatively simple application of the principle of atomic disintegration, which finds expression on a much more gigantic scale in the powerhouse of the company of which I am hereditary Master. The lesser always has been most readily understandable if the greater is explained in some detail.

"Early-day scientists discovered the entity of the atom and established the theory of electrons rotating around a more or less fixed proton. They made this theory intelligible to the relatively inexperienced masses of their day by comparing this atomic system with the solar system of a central sun and a congregation of attendant planets. With the object lesson of the sun as the fixed point in the solar system, these early observers erred in assuming that it was the electrons that constituted the vital factor in the atomic constitution.

"It remained for a daring originator to cast aside their theory and proclaim the fact which constitutes the underlying basis for the success of our present power system and the Death Ray. This was, as you are well aware, that the proton is the primal element. Through the practical application of his idea, the way was paved for the utilization of atomic energy, the existence of which long had been recognized but the employment of which seemingly had appeared as a vain dream of science.

"By utilizing protonic power to break down atoms by changing their electronic structure, a vast new power has been obtained. It was my august ancestor, Christopher Mowbray, who carried a correct theory into effect, made possible the development and control of this gigantic power supply and paved the way for the formation of the Power Company."

Hare moved impatiently. All this was history and the foppish autocrat interjected an ironic comment.

"You preach windily, Mowbray. Tell us of this new weapon. That is all we wish to hear from you."

"Pay no attention to him, Stephen," Harmon broke in, harshly. "Tell the story in your own way. We are not scientists and if you think we will understand you better by reviewing the past, our time is yours."

He turned sharply to his slender companion.

"If you have read history, Hare, you know that every great conqueror has gained his victories by discovering new methods of warfare. If Mowbray has found something that the Emperor does not know, I commence to have a faint hope we will succeed in defeating this invasion."

"AS you know, although long experimentation made it possible for us to employ atomic power," Mowbray continued, "practical use of it has developed unexpected problems that have baffled the most skillful engineers of the Power Company. Periodically, the atomic generators have burst all bounds, destroying all our safety devices in cataclysmic outbursts of uncontrollable energy and irretrievably wrecking everything with the scope of their titanic forces.

"For this reason, our power houses always have been situated in remote mountainous and desert areas, where servants of my Company, trained from birth for the dangerous duties of their caste, have kept vigilant watch and ward over the gigantic generators that furnish radionic power for the entire nation."

"Granted all this is true, what has it to do with Mongolia?" Hare again interrupted, smirking impertinently.

"For one thing," the Commander flashed back, "these power houses are practically opened to capture by the Emperor any time he elects to move against them. By this time tomorrow, he may have them in his power and render this entire nation helpless by diverting their sources of energy to his own martial uses."

Harmon exclaimed in amazement and Bullvers drew back, as though from a physical blow. Hare smiled satirically.

"As long as the generators operate, we can find means to attract their power for our own use," he said. "If necessary, we can wreck them and leave the Emperor helpless. Even the Master of the Power Company should know that."

"He knows something the Master of the Animal Products Company does not know," Stephen smiled. "The Emperor is both a great conqueror and a resourceful administrator. He anticipated the possibility his plans might become known in advance and that America, rendered desperate by invasion, might wreck its great power houses before he could seize them. His air fleet carries improved generators, models of compactness and ingenuity, which will amply supply his radiomotors and war-engines with energy for the conquest of America."

"The man's foresight is devilish," Harmon replied, his face serious.

"He is not the only one who perceived this possibility," Stephen continued. "My agents saw his plans and our engineers have been at work on similar ventures for months. We are as well prepared as he. Any time we had desired, we could have stilled the power houses and still have had sufficient supplies of atomic power for our military purposes."

Bullvers ran a trembling hand through her graying hair.

"You could have robbed my Amazons of power for their Death Ray weapons and still have had sufficient for the new instruments of war you mention?" she demanded, in amazement.

"Yes. As you know, the Death Ray is an adaptation of protonic power, the ray-thrower drawing force from the invisible stream of radionic power and directing it upon the intended victim. Resulting atomic explosions in the vital organs are instantaneously fatal. Checking production and emission of power from the giant central stations would have disarmed your forces, general. However, we had another defense, absurdly simple but ample to absolutely nullify its effectiveness."

"I cannot conceive of any defense for the Death Ray as absurdly simple," Bullvers declared, positively.

"The action of the rays is similar to that of the X-rays of earlier days. The problem was to find a means to prevent their entrance into the body of the victim. By administering subcutaneous injections of a secret non-poisonous metallic reagent, it has been found possible to start the protective reagent circulating through the tissues, ultimately finding lodgment in the false skin of the body.

"As the rays cannot penetrate the bodies of my soldiers and reach the deeper tissues, they are immune to injury. By prolonged experiment, we have found that protracted subjection to the rays causes only a scaling of the false skin, in extreme cases resembling a mild case of sunburn and readily yielding to the application of simple remedies."

"Time flies," Hare interjected, in a bored tone. "If we cannot deal with your rabble with the Death Rays, we can hang them. Have you anything more to say?"

Harmon's heavy hand descended upon the foppish aristocrat's shoulder and his stern face was thrust within an inch of the other's frightened countenance.

"Idiot!" stormed the Food Master. "Do you realize Stephen is more likely to hang you than you are to swing his soldiers?"

His eyes wide with amazed horror, the other drew back.

"What of this new weapon?" Harmon demanded, after a pause.

"It is an entirely new principle. It sets up a magnetic field outside the body, which reacts on its compounds.

The food master nodded.

"You mean the sulphur, calcium, sodium, iron and other constituents of the body?"

"Yes. Each atom of these elements or compounds becomes involved. The victim momentarily is convulsed with furious energy, as though an enormous amount of oxygen suddenly had been injected into his tissues. As a matter of fact, while we are not altogether sure about all details of the new weapon because it still is strange even to us, it seems probable that the oxygen in the body really is consumed almost instantly, causing this extraordinary excitation. Collapse immediately follows the disintegration of the haemoglobin in the blood, accompanied by solidification of the serum with immediate suspension of mental and physical activities.

"We have found a very slight period produces syncope, from which recovery is possible after a protracted period of convalescence. A very little longer exposure invariably has been fatal."

"Your troops in the Council Grounds today were armed with that new weapon?" Bullvers asked, with a catch in her voice.

The Commander nodded.

"Then my Amazons would have been doomed if a clash had resulted?"

"Absolutely. Furthermore, not a single soldier in my force would have been lost. A peculiarity of our new weapon also is its adaptability to long-range work. It has not been developed to a point where an individual can be singled out and killed at a distance, but its effects are so dreadful and far-reaching that an entire city could be annihilated almost in an instant."

"DOES the Mongolian Emperor know of this new weapon?" Bullvers demanded.

"I believe he does. In fact, I think he has developed a defense of some kind against it, but I know positively he has utterly failed so far to duplicate it, although his best scientists have been working for months trying to create a new weapon along the same lines. I also know that it was fear of the new war agency that prevented invasion a year ago."

"Why, then has he come now?" demanded Hare, insolently.

"Who knows?" Stephen replied, shrugging his shoulder. "Possibly, he thinks his defense is ample. It may be he does not believe we have the courage to resist, even though we possess a superior arm. Again, the Emperor is growing old and may feel that he must complete his conquest of the world now or death may intervene to prevent him from winning fame as the first master of earth."

Harmon nodded slowly, understandingly.

"You said you would place a soldier in the field for each Amazon and a reserve of equal strength. Why was your statement couched in that form?" he demanded.

"The burden of war must not be borne alone by my troops. They will not be slaughtered while the Companies furnish only gold. We will not waste our trained forces fighting Mongolia, while the Companies maintain their own, possibly hostile, military power intact."

Harmon again nodded slowly and with understanding.

"If the first army, composed of Amazons and your soldiers, is beaten or dispersed, what then?"

"The defense of the state will fall where it always should have been, on the shoulders of its people."

Hare's voice shrilled protest.

"This is no time for quarreling," Stephen asserted, decisively. "Our duty is to devise means to defeat an invading enemy. The Council can supply funds, open arsenals and make preparations to maintain the armies in the field. I will furnish what I hope will prove to be the reserves of victory."

"I won't authorize a pound of supplies until I know exactly what your future plans are," the Animal Industry Master declared.

Immaculately clad, his foppishness adding a final accent to his weak chin and pendulous lips, he negligently patted a slender limb with a perfumed hand.

"What the devil do you mean?" Harmon demanded.

The slender autocrat turned a cold eye on the speaker.

"What I know about this fellow is not favorable. He consorts with lower-class rabble—"

"He has made soldiers of them!"

"Lower-class rabble," continued Hare, placidly shift-

ing his watery gaze to the point of a daintily clad foot, "and thieves. I don't like men who foregather with thieves."

"This is infamous!" exclaimed Bullvers, generous anger in voice and manner.

She turned to Mowbray, real friendliness expressed in her bearing.

"I assure you we did not intend insulting you when you were invited to meet with us."

She continued speaking to him, but flung her words toward Hare.

"If you desire, we will withdraw and consider ways and means to obtain what our troops will need."

Harmon, startled by the thinly veiled threat to join with Stephen in taking by force what a reluctant Council might refuse to grant, half rose to protest but the fop was on his feet in an instant, scourging Bullvers with savage words.

"Join hands, if you will, with this proscribed traitor to his own caste and civilization! He will repay you by hammering us all down to the level of his low-castes. I'm not afraid of the Mongolian. He can be bought off again, as he has been before, but I am afraid of this man. You think he's a patriot. I tell you, he is as ambitious as Caesar and as full of dark secrets as the devil himself."

His face distorted by half-maniacal rage and fear, he stormed on.

"I can read his heart. He has decreed the end of the Companies and has marked our caste for extinction. Cast him out, I say, before it's too late. Cast him out! Cast him out—"

Something in the oppressive silence of the apartment weighed down his tongue. His voice trailed off into indistinct babbling. Slowly, the anger died from his eyes. He shrank back, a pitiful mockery of a man, fantastically garbed in the costliest trappings of a fabulously wealthy caste. Fear mounted to his dull orbs—fear and a light of insanity, that caused them abruptly to burn with almost prophetic fire. He flung his arms aloft, screams of shrill laughter pealing from his lips.

"Mad!" he cackled, his utterances choked by bubbling, fevered cacchination. "All mad!"

Tearing apart the silken hangings, he ran from the room, still shrieking laughter. Harmon's contemptuous voice broke the silence.

"That removes him. Now, we can plan for defense. Time presses. What have you to suggest?"

CHAPTER VI

A YOUNG woman in the blue and red uniform of the Foreign Legion thrust aside the hangings at the door and saluted.

"What is it, Colonel Conquist?" Bullvers demanded.

"A revolution has broken out in the city, general," she replied. "One or more divisions of the Amazons have massed at barracks on the waterfront and declared their intention to raise the banner of Mongolia."

"How far has this disaffection extended?" Mowbray demanded, instantly alert.

"I do not know," Conquist replied. "I did not wait for further details but hurried here to advise the general of the situation."

"What is the cause of the revolt?" Stephen asked, his brow furrowed with amazed thought.

"Cowardice!" laconically replied the Foreign Legion commander.

Words and tone indicated her contempt for the insurgents. Like others in her command, she had a private quarrel with Mongolia which never had been settled. The Foreign Legion was recruited from selected women exiles, driven from Europe by the invader. Chiefly of high birth, they had chosen the harsh service of the Matriarchy rather than to live in subjection to the alien conqueror.

"They declare the Emperor will slaughter any army sent against him," she continued, bitterly, "and think to propitiate him and save their lives by turning on America in its hour of need."

"Can we be certain of the loyalty of other divisions of the Amazons?" he demanded.

"I can answer for the Foreign Legion," she replied, proudly. "We are Europeans and each of us has a private score to settle with Mongolia."

"What is your advice, general?" he demanded, turning to Bullvers.

"Surround the rebels," she replied, coldly, "give them an opportunity to surrender and, if they refuse, mow them down. We do not dare leave treason behind us in the city when we face the foreign foe."

"I regret that our campaign must open with a battle among ourselves," he said, slowly. "However, I see no other alternative. General, you are better acquainted with the necessities of the moment. Command my troops."

Her bold, courageous face flushed with pride at the honor generously tendered by the Commander.

"Order out your militia at once. Assemble them on the waterfront. I will mobilize the Foreign Legion in the streets on the opposite side of the city. We will not call out other divisions of the Amazons. More of them may be tainted with disloyalty. After we crush this revolt, I will have an understanding with the others."

Her lips closed ominously.

"Before I am through I will know just where every woman in my corps stands, I can assure you."

Mowbray flashed orders to his officers while Conquist hastened away to mobilize the Legion. Moment after moment, reports came to the two commanders from their several units. Finally, Bullvers rose with decision.

"We are ready, Stephen. Let us see just what the situation is that confronts us."

They sped by radiomotor to the waterfront, where his soldiers had massed. She exclaimed with lively satisfaction as she surveyed their silent masses.

"They will give a good account of themselves! You have them under splendid discipline. Are they armed with your new weapons?"

"Yes," said Mowbray.

Bullvers nodded slowly.

"I wonder whether this does not mean the passing of my Amazons," she said, frankly. "Let me say this, Stephen, I, for one, appreciate the forbearance you have displayed in temporizing with the Council when you possessed such military forces and arms before which our forces are helpless. You have the nucleus of a real army. It would be an honor to serve under you—for the defense of our country."

The radiomotor swept to a landing on a tall building overlooking the great square in which the mutineers had congregated. In a few words, she outlined her plans.

"I believe my presence will bring them to their senses. We cannot afford the loss of a single trained soldier in this crisis. It is my intention to descend among them and whip them back to their barracks."

"They would murder you before you could utter a word," exclaimed Conquist, her keen face alight with apprehension.

Stephen joined in protesting against the proposal, but Bullvers was firm.

"It is my duty. I should have anticipated this insurrection among my own troops. The least I can do now is to gain control of the situation without loss of life among the soldiers whom one wiser than I has prepared for the nation's defense."

Conquist clutched Stephen's arm.

"LOOK!" she cried.

From a nearby towering warehouse, flames shot up beacon-like, its ruddy light heralding the destruction that had been commenced by the rebels. It grew larger rapidly, spreading greedily until the entire section was bathed in its sinister brilliance. Philip's silent troops also perceived the destruction and a sullen murmur rose from their massed ranks.

"They shall pay for this!" Bullvers declared, shaking an impotent fist in the direction where flames held high revel.

In the crimson glare, disorganized masses of Amazons could be observed in the open park. As Bullvers started toward the exit from the roof of the building on which they had landed, a young officer of the Amazons barred her path.

"Back to your command!" the general ordered, sternly. "What do you mean by skulking here while rebellion riots down there! This is one night when every loyal member of the Corps must do her duty."

"We will not fight them," the officer replied, sullenly, flinging out a hand toward the peopled park. "Why should we? What have we to fight for?"

"Everything! The honor of our hereditary military corps, the Matriarchy—"

"Which has made sexless automatons of us!" the officer interjected scornfully. "Do you think we never dream of those things other women have and which this brutal government has denied us—home, a mate and children?"

"You relinquished those things when you entered the Corps."

"What else could I do? I am of a lower caste. The Mistress of my Community House detested me because she could not break my will. She sent in my name to the Amazon headquarters and I got my orders."

"You had the right of appeal," Bullvers replied, curtly.

"To whom? To the Curatress of all the Community Houses! I did appeal. What good did it do? She read the report from the woman who hated me and I was told to accept the work decreed for me or sink to the lowest caste, as a rebel against authority, carrying my entire family with me. I sacrificed my womanhood and my dreams to save them."

"Occasional injustices are inescapable in any government," Bullvers replied, less sharply.

"It is all injustice! Look about you, as many of us in the Corps have done. Where is justice to be found? Our men degraded to mere work animals, part of our women dedicated to posterity and another part arbi-

trarily and autocratically set apart as sexless, pitiless, hopeless cogs in this governmental machine."

She flung her hands outward in a gesture of unrestrained misery.

"Fight! What is there in all this nation for which we should risk death in battle? If there is to be fighting, let the Council and the highest caste do it. The Amazons will not!"

"Consider yourself under arrest," the general replied, hotly. "After you have witnessed the fate of these mutineers, you may change your mind."

Under the menace of her fiery anger, the young officer retreated from the roof. Bullvers indicated the seething park with a gesture.

"I don't know whether I'll come back from there. If I don't, it will be because I have failed—because we all have failed—because our system was wrong and could not endure."

She paused a moment in deep reflection.

"Don't spare them, Stephen! Restore peace to the city, add to your own soldiers the Foreign Legion and those of the Amazons who can be trusted and smash Mongolia—or die!"

With a wave of her hand, the gallant soldier, magnificent in the only great crisis she had ever faced, resolutely hastened away. To Stephen and Conquist, peering downward from the roof on the milling mob, the picture of the end came with appalling swiftness. Her appearance at the building entrance brought a sudden silence. For a few moments of comparative silence, she harangued the rioters. Then a horrible, taunting laugh roared upward to their ears. The sinuous length of the mob swept over the spot where she had stood the moment before and slowly receded, leaving a form, gallant even in death, prone on the stones. While the mutineers still hurled indistinguishable insults at their victim, Stephen sprang toward the roof entrance of the building. Conquist hurled herself upon the young Commander.

"You cannot help her now," she cried, in a choking voice. "She has gone to the last reward of a fearless soldier. It is our duty to avenge her."

A swooping radiomotor flight carried them to the waiting column of citizen soldiers. Stephen flung them out from the waterfront while Conquist, with the Foreign Legion, began a flanking movement. Mowbray's silent advance emerged into the great square and the troops spread out, awaiting orders. Terror-stricken at the menacing array, many of the rebels turned to flee. Others drew together in military order, haughtily contemptuous of the popular force.

A hissing flame spat forth from the weaving mass and one of Stephen's soldiers recoiled, but immediately resumed his place in the front rank. A moment later, the square was horribly lighted with blue rays as the new weapons were brought into action by the militia. The massed rioters melted, like iron in the crucible. Again the blue rays flashed, revealing a scene of carnage and adding to destruction. Writhing forms lay in windows and terror-stricken survivors flung themselves prostrate or sought safety in flight.

Orderly as a giant machine passing over a field of ripe grain, the patriot column advanced, its front alight with the sinister sign of war. Screams and imprecations, ever drawing nearer, attested the success of Conquist's flanking operations, which closed the way of retreat. Occasional knots of Amazons, unwilling to believe that the

despised lower class mob actually could resist its long-time masters, fought with dogged fury, but their death rays, formerly potent, were powerless against the protected citizen soldiers, although they took heavy toll among the women of the Foreign Legion. The machine Mowbray had evolved was irresistible. It swept to the opposite side of the square, smashing rebellion as it passed. Conquist appeared, her red and blue uniform ripped by a glancing ray and blood streaming from a searing wound in her head.

"THE mutiny is over," she announced, grimly. "I have thousands of prisoners—more, I see, than your troops."

"They would not surrender to my men," he replied, gravely. "Now that resistance has ceased, see that all the wounded, ours and theirs, are given attention."

She saluted and flung swift, curt orders to subordinates.

"I wonder what the Emperor must think of this night of flame and destruction," she said, thoughtfully. "He will not be ignorant of the disaffection in our own ranks."

"It does not matter what he may think," Stephen replied, resolutely. "It is sufficient that we have proved the courage and discipline of our new troops and the terrible power of our new weapons. Let us hope they will be as effective when we face the veterans of the great king."

Leaving Colonel Conquist in command after the fire had been brought under control, Stephen hastened to the secret place of safety, one of his several country places, to which he had asked that Ardis Moore flee at the first sign of disorder in the city. The hour thus stolen from public duties he knew might be the last for many days that he could claim for his own. Not for a moment did he minimize the danger of failure, undoubtedly to be followed immediately by his own death through chance of the battlefield or the subtle scheming of the Matriarchy.

The latter, he knew, would make any sacrifice to effect terms with the Mongolian which would leave it free to deal with revolt at home. He entertained a shrewd suspicion that the autocrats, if assured by the Emperor they would not be disturbed in their immense possessions or their complete control over the working masses, readily would surrender sovereignty to the invader.

Whether the Emperor would be satisfied with a conquest that left even a shadow control with the Matriarchy was the one circumstance about which Mowbray entertained doubts. He knew the Asian ruler to be both daring and ambitious for the fame of having established the first nation with world-wide dominion. Upon this aspiration he counted for a refusal of subjection on any terms other than the complete abolition of the ruling caste, and this alternative, he was satisfied, the autocrats would resist to the last. If the Asiatic warlord should chance to lend a favorable ear to the scheming of the Companies, Stephen realized he faced a doubly difficult, perhaps an impossible task.

He faced these varied menaces confidently and courageously, but when he considered the perils to which Ardis might be subjected, his emotions were entirely different. He was a distinct reversion to an earlier type of American manhood. His attitude toward her was tender, as solicitous, as protecting as the traditional

attitude of men of his race in the days when they were conquering the wilderness, and laying the foundation for the glorious future of the world's greatest republic.

He had made arrangements for her future by providing the secret hiding place and also had stored a quantity of treasure for her use, in the event anything should happen to him. To acquaint her with the location of this store was one purpose of his mission. Leaving his radiomotor at a distance, he pursued his journey secretly to the residence, a private knock bringing Malcolm MacArthur, his trusted friend, to the door. A moment later, he was in her presence.

"I feared the worst, dearest," she cried. "I heard you had braved the Council in its own Chamber. Then, I saw the Mongolian fleet and knew another terrible danger menaced you."

"The first armed clash occurred tonight. We suppressed a revolt among the Amazons and the citizen soldiers proved their firmness under fire. A weight has been lifted from my mind."

"You have no time, with these responsibilities on your shoulders, to linger here," she protested.

"It may be my last visit in a long time. If Providence is kind and I return, life holds sweet promise for us both, but at this hour, I see the future only dimly. The one bright spot is our love."

"You do not doubt the outcome?"

"No, but I should be foolish if I did not admit that I am uncertain. My chief hope is our new weapons. They may afford us an advantage that will compensate for the military experience of the Emperor's veterans."

He sketched briefly the new arms with which his troops had been equipped, which had proved so appallingly effective in the clash with the Amazons.

"I'm afraid, however, that the Mongolian knows of them and has perfected at least a partial defense," he continued, soberly. "My agents in Asia heard rumors of great excitement in the Emperor's scientific cabinet some months ago on receipt of disquieting news from America. Later, they heard hints of a surprise for this country whenever invasion was attempted. I know of nothing that could have caused them either surprise or satisfaction except discovery of our new arms and the creation of an agency that would nullify their efficiency."

"If they have succeeded, will your army be helpless before the enemy?" she demanded, with quick alarm.

"There remains one other defense agency at our command, now nearing completion, which will be a complete surprise to him and his hordes," Stephen replied, grimly.

"What is it?" she asked.

"In principle, it is simple, although its application requires the construction of gigantic machines. Work has been proceeding on them for months, but they were intended originally to bring the Matriarchy to terms, and not as weapons. They are in a stage where a few days will assure completion. If Mongolia attacks before then, they cannot be used. A week, at this time, might determine the fate of the nation."

"It sounds frightfully complicated," she observed.

"In reality, it is the reverse. Briefly, these devices set up counter-currents to the streams of radionic energy sent out from my power houses, completely nullifying them."

"Would you deprive America of power?" she demanded, in amazement.

"Yes," he smiled, "if, at the same time, I could rob the Emperor of energy needed for his war engines."

"But a nation without power is unthinkable!"

"It would be without precedent in centuries. To accomplish this purpose, we employ the electrical energy of the earth in part, and also create cyclic eddies in the radionic power stream by utilizing its own force and turning it back upon itself."

"I do not understand," she declared, shaking her head. "I was not instructed in science. My caste is not permitted to know about these things."

"I realize the Matriarchy, as a matter of policy, always has closed the door of certain knowledge to your caste. That is at the base of one of the many reforms I hope to see the new state effect. However, you know how even in the earliest days of so-called 'wireless', there was provoking disturbance through the little-known 'static'. Our first machines similarly interfered with the power waves, 'fogging' them on a gigantic scale while obtaining energy from the stream itself. It was only a step beyond this to set up cross-currents of energy, which turned the stream upon itself, causing its very force to become its own destruction. Our interrupters are active precisely in proportion to the force transmitted from the powerhouses."

"But the volume of the stream can be increased, can it not, to the point where it will not be possible to interrupt it?"

"No. Experiments have proven that to be impossible. Our new machines can be stilled and their operations interrupted only by suspending the transmission of power."

"The Emperor's scientists will know what is wrong the instant his sources of power are broken."

"Undoubtedly, and I do not underestimate their ability to devise corrective measures, if given time. However, I feel sure they will not be able to create hasty agencies. In the meantime, I plan to strike the invading army."

"You will be deprived of power at the same time," she objected. "This will render your own weapons ineffective."

"We will not employ the interrupters unless we find the Emperor has devised a defense for our new arms. If he has, then we will deprive America of all power as a defense measure."

She thought deeply for a few moments. When she spoke again, her face was solemn and her eyes wide with amazement.

"The Emperor will be weaponless—lacking transport—isolated in a hostile country," she exclaimed. "Why, Stephen, his conquering army will be helpless—but so will yours!"

"Not entirely, sweetheart. We have anticipated this possibility and he has not. Scientists among us have been working for months re-discovering old methods of creating power through the use of coal. Orders have been issued for the mobilization of miners, who even now are marching into the old fuel pits, long since discarded. We are making machines to employ steam for propulsion and coal for smelting ore."

"Amazing!" she cried. "Why, the nation will go back to the old age of steam!"

"Exactly. That is not all, sweetheart. Stranger still are the weapons we are fabricating—guns employing powder and bullets—cannon that must be dragged by steam tractors or even by men in the absence of horses—

even swords and knives. If we are forced to use these ancient weapons, our war of defense will be the most extraordinary the world has seen since the so-called World War in Europe in the Twentieth Century."

"I feel strangely confident," she said, slowly. "The contest upon which you have ventured, Stephen, will be crowned with success. Our race is not dead, but is sleeping."

"If I did not believe that, I would have no incentive to go on. Governments are only incidents in the history of a living people. The republic failed because it did not impress upon the mass mind the lesson that successful administration demands the active participation of all honorable men and women in public affairs. This autocracy will fall because it is founded on the false premise that man was created to produce wealth, but not wealth for the spiritual betterment of man."

A chime sounded the hour and he rose. No word of doubt escaped the lips of either. The sorrow of parting, the outcome of which neither could foresee, was locked in their proud, courageous hearts. Clasp ing her to his bosom, he whispered in her ear directions for finding the treasure he had hidden for her use in the event of accident to himself.

"I have told you dear, I shall not need it," she declared, her gentle lips set firmly. "Wherever you go, I shall follow."

He paused on his way to the door and gave final instructions to Malcolm MacArthur, whose dour, faithful face lighted with humble adoration as he nodded an acquiescent head.

"You can trust me, Commander."

As Stephen emerged from the lonely house, a crone concealed behind a thick-leaved shrub cackled softly.

"So there is where the girl is hidden! The Matriarch will pay handsomely for information about Ardis Moore!"

CHAPTER VII

THE panic that had swept the city and the nation was reflected in the anxious faces the councillors turned to the Matriarch as she strode to her throne. Dawn hardly had reddened the east, yet all members of the august body were in attendance. Groups of white-faced women, only yesterday the haughty and stern rulers of the state, were gathered in the aisles, where the gripping word of fear was bandied from lip to lip. They broke and scattered to their seats before her resolute advance.

Each knew the city was rent with terrors. The kaleidoscopic changes of the previous day and night had shaken the foundations of peace and order. At the doors of factories and workhouses, as the Councillors sped to the Council, had been gathered hordes of vacant-eyed, nervous toilers. Throaty inquiries, incoherent replies, vague questionings, dire prophecies were abroad. Fear incarnate stalked the streets and invaded the homes of upper and lower caste alike.

For the first time in generations, the masses dared question the acts of their rulers. From other American cities came demands for information, along with vague, calamitous rumors. How were the autocrats preparing to meet the double crisis in the nation's affairs? What was being done to protect industry and the people from invasion and rebellion? As yet scarcely formulated, but

growing more palpable with each hour, rose a new clamor of protest from the sluggish masses, vaguely perceiving, for the first time, that the race's rich heritage of honor and glory had been bartered for a pottage of ignoble peace.

Lacking personal leaders for generations, slaves to the machinery of their industrialized age, men had not yet advanced their questioning to the point of a demand for information, while women, dazed by the sudden change in national affairs, waited in anxious foreboding for the outcome of the appallingly new situation.

Mowbray's soldiers became the popular heroes of America's men. Unbalanced demagogues, drunk with unwonted license as the bonds of Matriarchal control suddenly were released, flung incoherent arguments to excited audiences. To many of these crack-brains, the millenium had dawned, the hour when wealth should be cast down and dumb, brute-like men given license to riot and loot. Mobs that never before had dared miss a day from work-bench or office, refused to enter accustomed places of employment.

Under iron discipline, patrols of Stephen's soldiers were restoring order. Their presence and stern warnings discouraged riots and plundering. Masterful in their new-found authority, they were herding the laborer to his task and the clerk to his desk. The workers obeyed, even the contract slaves, lowest of all orders in the industrial life of the state, submitting without resistance to this stern, strange military authority.

The night's change had wrought no greater miracle, however, than was evidenced by the appearance of the Council. Hollow-eyed, white-faced and nervous, the autocrats sank in their seats awaiting the Matriarch's message. She reported briefly the events of the previous day and night. Her account of General Bullvers' death sent a shudder over her audience, but her recital of Mowbray's prompt suppression of the revolution left it cold. As she paused, Harmon demanded recognition.

"I recommend, Eminent Matriarch," he said, "that this Council express its thanks to Mowbray for his efficient service."

"Service to whom?" she replied, coldly. "The women who were in revolt were for peace, as this Council always has been and is, I believe, at this time."

"What folly is this?" he replied, his heavy brows contracting. "With the Mongolian already in our territory and a thousand matters pressing for action, we have no time for fool's play."

"Nothing is more important than the selection of a successor to General Bullvers," she replied, harshly. "The Council must take over control of military affairs at once."

"What of Mowbray and his men?" he demanded, with an ironic uplift of his eyebrows.

"The Amazons have proved an unreliable defense force," she answered, coolly. "We will hire an army from Mongolia or recruit one from the veterans of Europe and Africa and smash this insolent upstart."

"The Matriarch has solved a momentous question to her own satisfaction," he derided. "However, I am not sure we can raise an army of mercenaries at once and I also doubt whether the Emperor will hire the army he has landed for the conquest of America."

His face hardened and his voice changed abruptly. "Let us have done with nonsense. The only problem at this time is what shall be done with Mowbray."

"Depose him! Exile him!"

From all parts of the Chamber came vociferous demand for immediate action directed at the Commander. The members, temporarily forgetful of the Mongolian, clamored for the downfall of one they feared as much and hated more.

"WHO will do these things?" Harmon demanded, contemptuously.

"The Council is the supreme power," interjected Meering, her eyes flaming angrily.

"How will it depose Mowbray?"

"In the same manner as all other measures which it decrees are executed—by formal edict."

Laughter pealed from the heavy-faced autocrat's lips.

"Do you think this daring plotter, who has at his back the only efficient army in America other than that of the Emperor, will submit tamely to any decree this Council may adopt?"

Hare sprang to his feet, his weak face working convulsively.

"Where we cannot obtain obedience," he shrilled, "we can kill."

Other members of the august body shrank from him. From Meering's lips hissed a single word.

"Assassination!"

Never, within memory of living women, had this sinister resort of baffled autocracy been championed openly upon the floor of the chamber.

"Yes!" Hare sneered. "Are we children, to shrink from anything that is necessary to assure our own protection and the safety of the Matriarchy? The revolting Amazons killed Bullvers and Mowbray killed them. Now, we will slay him. What is the life of any man in this mad hour?"

He flung a glance of concentrated fury toward Harmon.

"Yesterday this man called me mad. Beware of him! He plans to throw open the Food Company depots to Mowbray."

"This is a time for sane counsel," the Food Company Master replied, disdainfully. "That man is insane."

"Mad! Who is not mad?" shrieked Hare. "This Council will be madder than I if it aids Mowbray to braid a lash with which he will scourge the backs of all of us."

He rubbed a trembling hand over his pendulous lower jaw.

"Refuse him the great resources of the Companies. Rob him of his power, or he will lord it as master in this Chamber and we will grovel at his feet."

The effect of his words was magical. He voiced thoughts and apprehensions all others present harbored, flogging into action their irresolute minds. A clamor of approval rose from the autocrats. Harmon alone remained silent, his heavy face set in an ironic smile. Mallay, master of the Prison Company, raced through the open door.

"Mowbray is here!" he warned.

"Heaven appoints the hour!" shrilled Hare. "Mine is the hand of justice!"

A weapon flashed in his grasp as he raced down an aisle toward the doorway. Over many doubting and uneasy minds in the Chamber flashed a fearsome thought of savage soldiers glutting their revenge for Stephen's death in the blood of a helpless autocracy.

"Halt that madman!" cried Harmon.

Not a hand was raised to check Hare, however. He paused on the threshold, his weapon clattering to the floor. Turning to face the Council, he called a solemn warning.

"The hour has not yet come. Mowbray is protected by soldiers and the Chamber is surrounded."

As he paced moodily to his seat, Colonel Conquist appeared in the open doorway.

"Commander Mowbray awaits a deputation from the Council."

She cast a scornful glance over the irresolute autocrats and retired.

"This woman of the Foreign Legion speaks as the herald of a king!" Mallay exclaimed.

"Why not?" answered the cool, ironic voice of Harmon. "If I had the army he commands, I would be Emperor of America."

The Matriarch splendidly dominated the situation. Calling Harmon to attend her, she went to meet Stephen, who paused at the threshold of the Chamber. Around him were grouped numbers of his officers, some in the olive-drab uniforms of the citizen soldiers and others in the red and blue of the Foreign Legion.

"We commend your courage and thank you for your efforts to restore order," she said, her head proudly high. "We will assist your campaign against Mongolia, but we demand assurances of your loyalty after the invaders have been defeated. Otherwise, we shall refuse money and supplies."

"I give no guarantees except to resist invasion and maintain public order," he replied, gravely.

"Then, the Council will oppose you to the last."

"What of the Emperor?" Conquist demanded.

The Matriarch fixed her with an icy glance.

"We will fight any one—we will buy every one—we will rule or the nation will crash in ruins."

Her face flushed with anger, she re-entered the Chamber.

"She is telling the Council how it can send the country to the devil—or the Mongolian," commented Conquist, eyeing Stephen expectantly.

He nodded agreement.

"The situation is unfortunate," declared Harmon, who had delayed departure. "Still, she is not to be censured too harshly for demanding assurances. The upper caste has most to lose through change."

"My men stake their lives. So do the women of the Foreign Legion," Mowbray answered, sternly. "Who can hazard more?"

"Life is transitory," Harmon replied, enigmatically. "Property is eternal."

Abruptly, his lips curled in an ironic smile.

"What are you going to do with them?" he asked, nodding toward the Chamber.

A clamor of discussion had risen within, following the return of the Matriarch.

"I had hoped the issue might not come in this manner or so soon," he replied, "but I am prepared to meet it. Simeon Shackelford!"

An officer leaped out of the press about him and saluted.

"Clear the Chamber!"

"You defy the Matriarchy?" exclaimed Harmon, drawing back.

(Continued on page 827)

Pirates of Space

By B. X. Barry

STRATEGY is a very powerful factor in the successful maneuvers of warfare, as we know it at the present time. Often better than the strongest line of defense, or the most destructive weapons, is the careful study of the enemy's condition and the discovery of its vulnerable spot. In fighting pirates of interstellar space in the future—when interplanetary travel has emerged from the field of speculation—probably fighting fundamentals, very similar to our own, will need to be followed, although destruction will be ever so much more complete and much swifter. In this story by a well-known writer—new to our pages—ingeniously thrilling situations occur, which help to make it an excellent tale of interplanetary significance.

Illustrated by MOREY

CHAPTER I

A Chase Through Space

BEGINNING at 8 P. M., San Francisco time, on the memorable night of June 20, 2099, News-and-Views broadcasters began heralding the startling, thrilling, pulse-quickening story of the current flight of the spaceship *Agular*. The craft was a regular interplanetary liner on the Earth-Mars-Venus route of the Astro-Via Lines, Inc. As a result of the soul-stirring story excitement was rife not only in the Americas but throughout the Eastern Hemisphere as well.

Spacegrams were being flashed to Mars, Venus and other planets of the civilized explored universe. There was every reason to believe that other planets besides the earth would receive the news with as much tumultuous excitement and public concern.

At the hour noted, according to the dispatches, the liner, carrying a full complement of officers and men and some two hundred and eighty passengers, entered the earth's atmosphere from the West at a rate of speed never before known at such a low altitude. Observers in the mountain observatories in California and Colorado reported the ship to be falling. Millions held their breaths, figuratively speaking, until a radiograph a few seconds later stated that the *Agular* was firing all her forward guns terrifically in a wild, pyrotechnically marvelous, volcanic effort to break her fall. So forceful were these explosions within the earth's atmosphere that their effect was felt in all Western cities and the smooth surface of the Pacific was blown

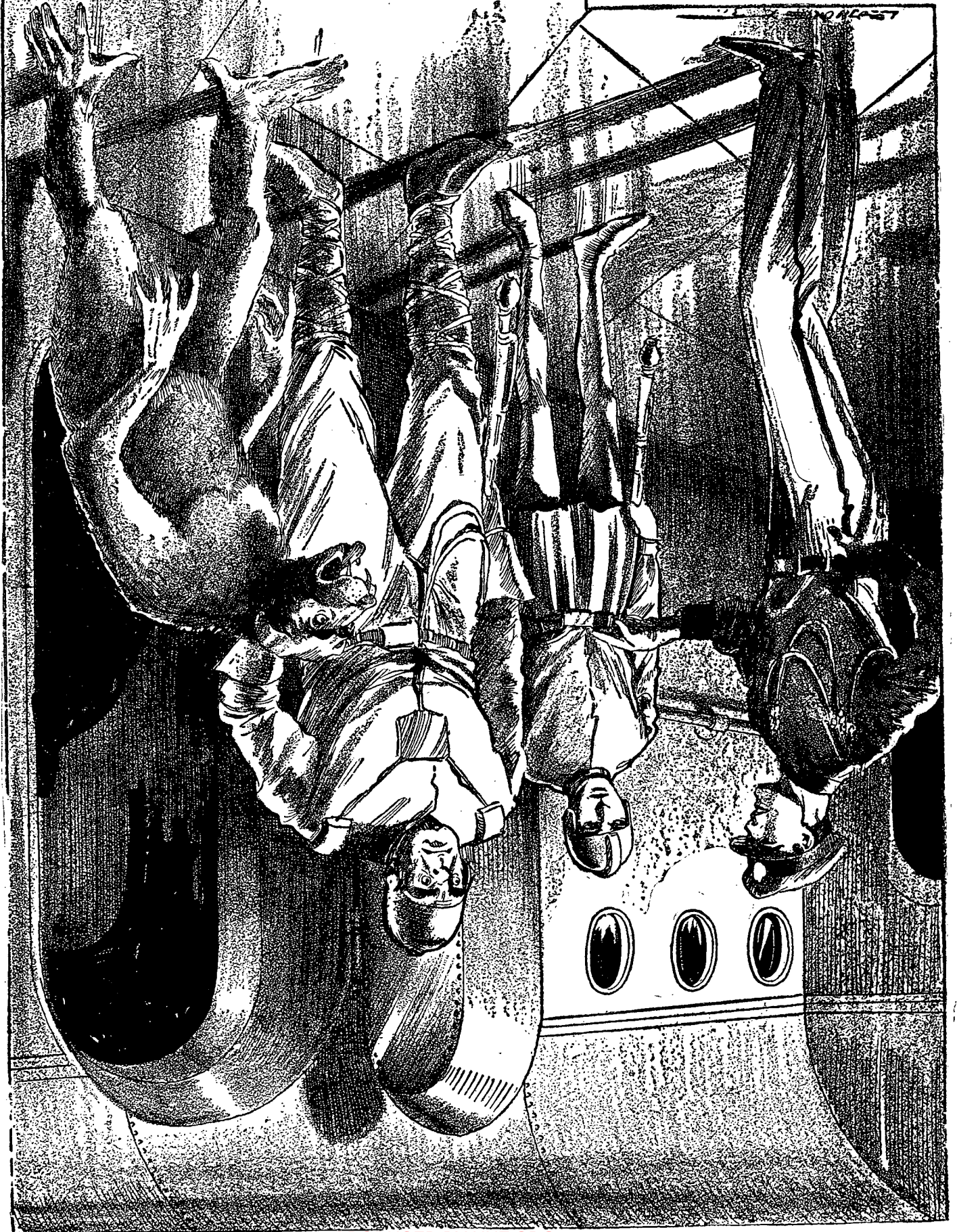
into violent surgings producing mountain-high waves. It was estimated that at least ten times the usual amount of explosives was being used by the *Agular's* rocket guns with each blast. This estimate was later officially confirmed.

The full and gorgeous view of the wild flight of the *Agular* within the earth's atmosphere was plainly visible to millions in parts of Western Canada and Mexico and all of the United States lying west of the Mississippi River. It was a weird, wild, nerve-tingling and never-to-be-forgotten sight—a magnificent, mechanical comet shooting tail-first into the great air-cushion upholstering the globe.

The *Agular* was forced to use her rocket guns to within a few hundred feet of the earth's surface and the atmospheric effect, of course, was most surprising and unusual. People were blown from their feet on the higher floors of skyscrapers and on the various levels gusts of air blew through street tunnels like blasts pumped from some great air gun.

The entire spectacle and holocaust produced by the flight took only a fraction of the time involved in the telling of it. In fact it was only a few seconds after the first News-and-Views dispatch began to wave through the ether before a flash came over that the ship had landed, probably perforce, at a rugged and unfrequented point in the Colorado Rockies. So far as was known, this dispatch said, the ship had landed safely and no lives had been lost. For some little time the people of the earth were forced to await a first-hand story from Captain Harold Kane of the *Agular*. Finally the story came through and then many mistakes and misapprehensions were corrected. We quote from a News-

The third member of the crew was covered with heavy, black, shaggy fur.



and-Views radio of the time, using only that part of the text uttered by the doughty captain himself:

"The public on the planets of the civilized and explored universe will have to thank my superiors in the Spaceservice for their consideration in permitting me to make this report direct. This also accounts for the delay in making the real facts known. A short radio conference with Government authorities in Washington and the Astro-Via Lines officials in New York was necessary before it was ordered that I report personally on the News-and-Views channel.

"Pardon a brief personal allusion, but it is necessary to recall that there was a considerable controversy at the time I was given command of the *Agular*, one of the largest liners in Spaceservice. There were those who argued that I was too young to be entrusted with such authority and responsibility. I have had my ship now only two years and it is with the deepest regret that I now have to report on a near catastrophe. I hope, however, that the public of the three planets connected by our line will decide that the interests of all concerned have been conserved with as much judgment as might have been displayed by an older and more experienced man.

"May I say in beginning that at no time was the *Agular* actually falling and"—after a pause—"our landing was not forced. We had to put down at the Tri-planetary Foundries on the slopes of Mount Massive, Colorado, to land two distinguished passengers, one a representative of the planet Venus, and the other of the planet Mars, in connection with the important interplanetary project now being carried out at this great metalworks. We will be under way in a few minutes for our regular port on Long Island, making a brief stop at Goddard Spaceport, Chicago, to dispatch passengers and interplanetary mails.

"Our mad flight, a part of which was within the earth's envelope, was due to circumstances of rather an alarming nature. At a point within the moon's orbit we were almost overtaken by battleship X-13 of the Pirates of Space. X-13, it will be remembered, was the first of the earth's Space-navy battleships to fall into the hands of these pirates. This ship, armed with thermo and disintegration ray mortars of high power, attempted to overhaul us and relieve us of our treasure. We realized that, if the pirate ship were successful in overhauling us, after robbing us, they might have trained their thermoguns and rayguns on us, disintegrating our big liner or melting us to scrap, thus meting out a horrible death to every soul on board.

"To avoid such a calamity, we had nothing but our speed in flight to rely upon. Being a smaller craft of superior comparative rocketpower, we knew we were faster. We turned tail and fled directly towards the earth.

"Our gravity neutralizers at such speed were powerless to check our mad headlong flight earthward and so we had to use all the power of our rocketguns up to a point which seemed to be within a few thousand feet of the earth's surface. Our neutralizers then began to function, repelling

the earth with sufficient force to enable us to make our landing without mishap.

"I desire to say in conclusion that it was a well-calculated, if not a perfect landing. We settled to earth quite easily within twenty feet of the exact spot calculated by our navigators at a point in space near where we first sighted the space pirates."

That was all. Captain Kane always could be counted on for brief and candid oration and diction.

As has been indicated by Captain Kane's remarks, his affairs, through no fault of his own, had become involved in politics. He realized that powerful and rather sinister influences were working against him and that the plot had support among a certain selfish element within the Spaceservice itself. He was conscientious in the performance of his duties and, therefore, he did not believe that any power could succeed in holding him back from advancement.

So, it was with a light heart that he speeded to his home port on Long Island. He naturally supposed that he would be publicly commended on his success in having saved the big space liner and her crew and passengers from the hands of the Pirates of Space, whose relentless, destructive and murderous depredations already had made history. The spirit of youth is ever cheerful—sometimes without real reason. Had the young captain known the exact state of affairs, he would have had no cause for exuberance.

The blow came within a few minutes after he had reported at the main offices of Astro-Via Lines, Inc. in lower Broadway. He was summoned to the president's office and in a few minutes his usually sunny sky had clouded. His soul was plunged into gloom.

The president's greeting was cold and his few remarks terse and icy.

"You will be relieved from duty beginning at once and until further notice," said the president, "pending an investigation of your altogether hazardous flight within the earth's envelope. The Interplanetary Commerce Commission already has the matter in hand—"

"But—but," stammered Captain Kane, who had been rendered almost breathless by the suddenness of the attack.

"No 'buts' in this service," said the president with finality. "Good day, Sir. If you should be needed again you will be notified."

With a heavy heart and an inward stormy rebellion against the injustice of the whole matter, Captain Kane slowly walked out of the great building out upon the fourth level of the street.

A busy crowd surged about him. The traffic at this point and hour was dense. There was much to interest any young man who had just returned from space, but Captain Kane paid no heed. His brooding anxious thoughts occupied him completely. Almost in a daze he wandered about from square to square and from street level to street level for the greater part of the day.

CHAPTER II

Pirates of Space

FOR those readers who may have had only the general historical records available, a brief review of the history of the activities of the Pirates of Space might not come amiss at this point. It will give a better

knowledge of all affairs and events which led to the unhappy predicament of the young spaceship commander.

Official Government records set forth that just eighteen years prior to Captain Kane's mad universally exciting flight within the earth's atmosphere the people of the planet Mars were in the throes of bloody and uncontrolled rebellion.

The Earth Republics dispatched the largest battleship of the spacefleet to protect earth interests on all space lanes leading to Martian ports. Like action was taken by the cooperating and allied governments on the planet Venus.

At the time it was held by some that one ship representing each neutral planet would be entirely inadequate to cope with the situation, but this proved untrue, despite the fact that the earth expedition did end disastrously.

The Martian rebellion leaders had no desire, it seems, to vex either the earth or Venus forces and kept their bloody war well out of space. In fact they confined it to their own planet. The rebels led by Thaxos, present King of all Mars, easily captured the Martian space-navy and at once marooned it at the big Spaceport at Krox, Martian naval base.

All Martian ships remained out of spacelanes until Thaxos had won his bloody wars and had made permanent his court and throne.

At the time the earth spaceship X-13, later the pirate flagship, joined the Nendus of the Venus spacenavy, there were wars and rumors of wars upon earth, as will be remembered. The spacenavy was reported to be in a wild state of disorder, with a chance of the rebellious spirit of Mars infecting all earth. Stern leaders and wise heads on earth finally succeeded in quelling the widespread disquietude, but their peaceful efforts could not reach out to the warship X-13 with its frenzied and bloodthirsty crew recruited from daredevil adventurers of all universal ports.

Messages to the commander of the X-13 as she rode the spacelanes, millions of miles out in the great void, were answered by the radio operator.

"Commander cannot be reached," came the startling message just before the mutiny got under way. "He is having trouble with the crew. I am barricaded in my cubby and I do not know exactly what to expect. Situation appears grave."

The radio operator aboard the X-13, a mere boy, yet with the heart and spirit of a Viking of early earth history, remained loyal and kept his messages flashing earthward while the officers of the ill-fated X-13 fought their heroic and unequal battle with the maddened blood-crazed crew. Finally these messages stopped coming through. This was within a brief hour after the slaughter started. The hero's last message read:

"Nendus of Venus must have picked up my calls but she has not approached us although she is but 30,000 miles off on Mars-Venus lane. May be afraid of violating neutrality or else feels she cannot desert her post. I don't know. Still barricaded in cubby. God forgive me but I am afraid. I hate to die like this but I can only die trying. From what I can see decks fore and aft are shambles. . . . Officers must be dead and mutineers in possess. . . . My last. . . . They are ramming my door. . . . Soon a knife at my throat or a raygun at my solar plexus.

. . . I will die sending. . . . Door is shattering . . . only a—They are——"

And so died or was made captive one of the earliest of the earth's spacenavy heroes.

One individual; a giant renegade Martian named Quantok, is believed to have corrupted the entire crew of the X-13 and to have brought about the mutiny with his tales of wealth and beautiful native women to be found on some of the small habitable asteroids in space. He had been with the original Martian Asteroidal exploration expedition before joining the earth navy as an expert space navigator.

The X-13 as a pirate craft, naturally could not touch any point on Mars, Venus or earth and yet it had to have a base, where explosive could be made for its rockets, lubricant for its machinery and all of its thousands of articles of supplies could be procured. Quantok was probably the one man in the universe who knew of many such bases on the smaller planets off the beaten lanes of space travel.

From such a base he operated, waylaying and "scuttling" or rather disintegrating space passenger craft and merchantmen after relieving them of their treasure.

His first great coup was when he captured the small auxiliary spacebattleship N-130 and added it to his fleet. Later he augmented his fleet with another small battlecraft, the *Hadenda* of Venus. He never molested Martian craft, due evidently to the fact of his nativity.

The crews of these ships—or such of them as refused to join his bloody pirate forces—were forced to walk naked from the ship's locks out into space, after their pressure clothing had been taken from them.

Many were the fights that were had with Quantok and his merciless bloody forces through the years. Always these fights were losing ones for the forces of law and order.

A hundred explorers and warriors from various bases were recorded to have started out to find and destroy Quantok and his base, but to find this base among the asteroids was like seeking a mustard seed in a great bin of wheat. Either these police explorers never returned, or they ran afoul of Quantok's forces and were ruthlessly murdered or their craft melted with all on board. A few there were who returned after many moons without having found any trace of Quantok, his ships or his base.

So it was that the foul-hearted Quantok remained at large in interplanetary space, a relentless stalker of beautiful women and a merciless murderer of brave and stalwart men.

CHAPTER III

A Hissing Inferno

CAPTAIN KANE was revolving these known facts about Quantok in his mind as he walked the street levels of lower Manhattan. His was ordinarily a sunny disposition. He seldom gave vent to hate, but at the moment his heart was full of loathing of the diabolical desperadoes of space who were responsible for his unjust dismissal from Spaceservice. Could he have laid hands on Quantok, it is certain there would have been one less outlaw to harass civilized planets! He believed in his heart that some day he would get his chance to square accounts with this merciless marauder of space. He determined that when this chance came he

would give his life if necessary to rid the universe of the archmurderer and his pirate band.

He entered a skyscraper and took a lift to the fourteenth street level from which he could see the buildings towering above him some 300 stories in the air, and he could get a glimpse of the sky through the darkening street canyon. The sky was speckled with small atmosphere-going craft, as was usual at this point. As he gazed upward at his elements, the upper air and outer space, he longed to be away from the metropolis.

There was one man he knew to whom he could always take his troubles and be sure of sympathetic audience. This man was his uncle, Donald Hazzard, the great inventor, the man who had raised him, after he became an orphan at five years of age. Hazzard was head of the Tri-planetary Foundries in the Colorado Rockies. His uncle, he knew, was a busy man, but never too busy to see and counsel with him. He determined he would go to this great man, his only living friend and relative, and lay his soul-burden down.

He entered a building and entered a lift which, like a bullet, shot past a seemingly never-ending succession of floors until it finally reached the air-level platform. Here he signalled a trans-continental taxi-plane and after stopping at his lodgings in the Tarrytown section of New York City to pick up a trunk and a bag he was off for the Rockies. Within an hour, just as the dark of evening was falling, the glare of the great foundries could be seen from a hundred miles away.

The spectacle of these foundries had to be seen from a birdseye view point to be appreciated. It was one of the most magnificent panoramas to be seen on any of the planets. The great radio furnaces were located on the highest of the triple peaks of Mount Massive, 14,600 feet above sea level. A great shaft or tower of whirling incandescent flame stood at this point, extending a mile in the air. It was spinning like a top in a specially prepared and lubricated socket. This was the aerial which caught radiated heat from the earth tropics and the sun's rays.

Below this great shaft of revolving flame, a mile-and-a-half down the mountain was a large round lake of fire—a fireclay-lined crucible a mile in extent, and filled with a molten gravitite, the new weightless metal. Hal Kane's uncle, Donald Hazzard, the inventor and the head of the foundries, had discovered this metal and had invented the process of producing it in quantities.

The lake was a veritable fiery fountain of hell—a surging, seething, pitching, bubbling, spouting, splashing cauldron of living incandescence. Together with the great aerial shaft of flame, it fanned a great glare miles into the sky. It was this glare which was visible from all directions for a hundred miles or more according to the clarity of the atmosphere.

The heat naturally was terrific, and only special processes, invented by Hazzard to control it, made it bearable to the executives and laborers employed at the smelting works.

The meteorological and geographical efforts, too, were most extraordinary, as conditions generally for miles around were completely altered. For instance, time was, when eternal snows capped the triple peaks of Mount Massive and vicinity. This snow in winter was from twenty to ninety feet deep. Great glaciers with their crushing weight of snow and ice glided slowly down the mountain sides. That is history.

Now, there are no snows on these mountains. The great radio furnaces of the Tri-planetary smelters and foundries melt the snows as they fall. The resultant precipitation goes to irrigate intensified growing crops in the valleys below. Here in the valleys are grown the plant foods compressed into the more expensive of food tablets. The cheaper food tablets are synthetically manufactured as is generally known.

The landing field and small settlement of the foundries were located on the east slopes of Massive, a mile and three-quarters below the plant. It was here the executives and laborers had their homes and where the officers and laboratories were located. In these laboratories Dr. Hazzard was to be found at almost all hours.

The settlement was called Hazzardville and it was here that Captain Kane's air-taxi discharged its passenger. The driver collected his fare and turned the nose of his plane west, hoping to pick up a return fare at the nearby town of Leadville.

Captain Kane walked directly to his uncle's laboratory and was admitted. He found his uncle in conference with the Martian and the Venus dwellers; representatives of their planets in the work going forward at the plant. The hour was 9:30 in the evening which was the same as 9:30 in the morning to Dr. Hazzard, for he often worked clear around the clock.

"How are you, Hal, my boy?" said Dr. Hazzard, as Hal was shown into the conference room. "We all have been following your troubles on the Views-and-News. Sorry, my boy, so sorry, but a good two-thirds of the universe seems to be in sympathy with you. The others, I am afraid, have selfish interests and ulterior motives." The two shook hands heartily and then Dr. Hazzard turned to his conferees. One was Tanex of Mars, a giant standing twelve feet tall, but not a giant among his own people, being a little below the average Martian height. The other was Anoda Vena, a Greek god standing but five feet two. A midget in the eyes of the earth and Mars, nevertheless as perfect a physical specimen of manhood was not to be found on either earth or Mars. His garb of tightly fitting animal skin resembling chamois was studded heavily with precious gems, such as proclaimed Venus dwellers to be the most generally wealthy of all known inhabitants of the planets of space.

Dr. Hazzard's eyes ran proudly over the form of his nephew. The doting uncle believed his nephew compared favorably with either of the visitors who were picked men of their people. "Need I present my nephew?" he asked. "You rode on his ship; you must have met him before."

"Yes, indeed," spoke up Vena, "he saved our lives and gave us a great thrill."

"We have all agreed that you have been given a little the worst of it," said the Martian throatily and Hal wondered if he caught a ring of insincerity in his voice. If so, it was remarkably well disguised.

"I am not complaining," asserted Hal resignedly, "I am only hoping that some day I will be given the opportunity to lead a force of craft in a punitive expedition against Quantok and his whole horrible pirate horde. If I ever get such a chance, I promise to either sweep the realms of space clean of him and his ilk or die in the attempt."

"Well spoken," applauded Vena.

"And like a true earth man," added Tanex, but Hal

believed that he noted a slight tinge of sarcasm in his tone, although he admitted in his mind that this might have been due to his own anxious and harried mental state.

At this juncture a bright, beautiful blond girl bounded into the room. She appeared to be about seventeen. Her beauty might have indicated she was a native of Venus had it not been for her height, which was more of earthly proportions. On closer view the visitors noted she was, in many characteristics, totally unlike the people of any known planet. Her beauty could not be described in words, although the adjectives, "gorgeous," "dainty" and "magnificent" suggested themselves.

The girl ran directly towards Dr. Hazzard, but suddenly beholding Hall she turned sharply and ran to him, throwing her arms around his neck and hugging him lustily.

"Cousin Hal," she fairly cooed, "I just had to burst right in here, if I was ever going to see you and Daddy. It just seemed like I was never going to see you at all. I trust your visitors will pardon me."

The young captain seemed overjoyed to see the girl and returned the greeting in kind. Dr. Hazzard hastened to present the girl to his guests.

"This is my ward, Miss Beth Lee Hazzard. She and Captain Hal were children together. Neither remembers their parents. Being a physician, among other things, I raised them both without a woman's help. I believe they do me credit; at least, I am recklessly fond of them. This little girl has been my closest confidant. She knows more about my work and affairs than I do. We can discuss anything of a scientific nature in her presence." Then to his ward. "Sit down, Betty; I am sure my guests will be glad to have you with us for awhile."

The admiring glances in the eyes of the guests proved the doctor was right. In fact Hal thought the Martian looked at the girl just a trifle too closely. The doctor was too engrossed in the affairs of the conference to notice the deep interest the Martian seemed to be taking in the girl. He plunged back into the trend of conversation that had been interrupted by Betty's appearance.

"Well," Dr. Hazzard continued with conviction, "Hal has said he would like to engage the pirates personally and someone will have to sweep the skies clear of Quantok and his followers. That is certain, for as long as he is at large our whole Tri-planetary enterprise will be held up—and we are powerless to proceed."

The others nodded a silent assent. They knew that Dr. Hazzard was recognized as the great scientific and mechanical genius of the universe and that his inventions and discoveries were many and marvelous. Greatest of these was his new-type spaceflyer designed to ride an active radio channel as a boat might ride a canal.

Radioed impulses traveling at the rate of 186,300 miles a second operated the mechanism of this spaceflyer and caused it to develop, in space, a speed in exact proportion to the impulse which drove it forward. In other words, the craft was designed to travel by the action of radio, or at an approximate rate of 1,000,000 miles an hour, enabling it to fly from the earth to Venus in something over 93 hours, depending on the time necessary to accelerate and decelerate at the take-off and landing. The engineers' estimates of time required for acceleration and deceleration were given as an hour-and-a-half at each end, making a total estimated trip-to-Venus time of ninety-six hours.

This speed was a little greater than twice as fast as any velocity of travel before known and 2,000 times as fast as any rate of travel known on earth up to the time of the invention of the Donvorth rocket motor in 1999, just a century previously.

In order to maintain this speed, it was found it would be necessary to have auxiliary relay radio power stations fixed in space, to be located about 500,000 miles apart.

It was to construct these gigantic relay stations that Dr. Hazzard's foundries were casting enormous weightless-metal cubes. These metal cubes were to measure a mile in extent each way. They were being fashioned with an inward bulge to put the greatest pressure of manufactured inner air on the joint edges of the cubes. The casting forms had been placed further down the slopes of Mount Massive. Gravity delivered the fluid metal through conduits from the lake of fire to smaller vats near the forms. In these vats a final process was completed which made the metal weightless. Then pneumatic pressure pumped it while it was in the liquid state into the forms.

It was the project to tow these cubes to the proper places in space by rocket motors. Once placed they would become veritable Cities of Space with homes, machine and repair shops and power plants within their confines.

Naturally, as the scientist explained, the Cities of Space could not be placed while the space lanes were threatened by bloodthirsty pirates. The menace was one to torture the souls of men on all civilized planets and to fill their hearts with dread.

To a scientist like Dr. Hazzard the situation was most trying and vexatious.

All this was discussed in the presence of Captain Hal and the girl Betty, who were combining business with the pleasure of being in the presence of their beloved guardian.

It was finally agreed that the civilized planets of the universe must carry the war into the very teeth of the pirates to remove once and for all the horrible menace from the lanes of space. Just when would the rulers of the three great planets act drastically, the conferees asked one another. All expressed the belief that the proclamation of a general war against the pirates would not be long in coming.

This conclusion seemed to give them all satisfaction, for Dr. Hazzard produced cigars and all lolled back to enjoy a few cool inhalations of the weed before resuming their discussions. But their peace was not to remain long undisturbed.

Suddenly came the interruption like a burst of hail in midsummer, but a thousand times more alarming. . . . Five quick sharp bells from the News-and-Views radio set in the corner of the room. . . . This was the general alarm signal used by the broadcasting service to announce the coming of a message of unusual importance to all the world.

Had the matter been of local interest to the Western Hemisphere of earth the signal would have been three bells—or for the Eastern Hemisphere four bells. The five bells indicated that the flash was of world moment and it caused all in the room to jump from their chairs. Dr. Hazzard rushed forward and threw open the view-screen switch and turned up the sound tubes for greater audibility.

CHAPTER IV

A City Laid Waste

SOON the shadowy outlines, on the television screen began to take form. They pictured a city and much of its surrounding countryside laid waste. Fires still smouldered where thermogun rays had evidently started wild conflagrations. Bodies of dead and maimed were strewn about the streets and ruins. In an improvised shelter on the edge of town the workers of the Red Cross could be seen moving about among the survivors and engaged in their tasks of mercy. It was too widespread a scene of havoc to be described much in detail. It was a pitiful—a harrowing view.

In words distinct and nervously measured came the accompanying report:

"A battleship out of space which could have been none other than the X-13 flagship of Quantok, the pirate, has destroyed Albertville, Ontario, site of the Canadian rocketfuel factory and magazine, the largest in the world. The city and the magazine were sacked.

"Thousands are dead. The exact number is unknown. Practically all buildings in the town and surrounding country were burned. Thousands are homeless. Some of the dead and much of the property were reduced to dust by disintegrating rays.

"The town defended itself with all the powers it possessed, but the rayguns of the battlecraft, being of superior range, melted down the mortars of the fort at the magazine. The garrison forces at this point were the first to die. The garrison numbered 5,000 officers and trained fighting men.

"Townpeople fought the invaders in the streets hand to hand and with such weapons as were available. They succeeded in killing a number of Quantok's men and here develops an element of weirdest mystery. Among the corpses of Quantok's followers was a type of physically perfect yet strange human being not identified with any known planet. Each of these bodies had a metal circlet about the neck on which was engraved in Martian characters: 'Quantok, Rex, Enslaved Fighting Forces,' then a number.

"This is the first time that Quantok has invaded a realm of any of the Tri-planetary Alliance. Capitals of the worlds are shrouded in dread that the pirates will pillage further at another time.

"From Washington comes the suggestion that the spacenavies of Earth, Venus and Mars unite in a war against Quantok. This, doubtless will be the outcome. The first war ever to be waged in space is regarded as but a few hours away."

Then came the closing signal, a short buzz, indicating the end of the dispatch, which, like all News-and-Views bulletins, was brief, considering the unprecedented importance of the news.

Dr. Hazzard sprang forward and turned down the machine.

"Horrible!" ejaculated the visitor from Venus. He seemed dazed by the frightful import of the news dispatch.

Dr. Hazzard was standing in front of the televisior with his hands before his eyes as if to shut out the full horror of what he had seen. He finally found words.

"Deplorable!—but—thank God," he exclaimed fervently, "At last it is to come, the war we all have been praying for. The war that will make the lanes of space safe for civilization and commerce. Let us hope that we will soon see the end of this carnival of pillage, rapine and murder."

Each of those present echoed the prayer in his own language and each then continued to express surprise and horror at the sacking of the peaceful city and the attendant slaughter. Then, for a while, they sat looking at each other without saying a word. Each seemed too engrossed in his own thoughts, aroused by the momentous news, to find any heart for conversation.

Captain Hal was the first to speak. "My standing with the Astro-Via Lines does not affect my rights as an Ensign in the Spacenaal Reserves," he asserted with a show of pride. "I will radiophone Salt Lake City for a taxi to convey me to Washington to await assignment. Gentlemen, I must leave you."

"Oh, must you really go?" cried Betty, jumping up and throwing her arms out to him. "Why I have only been with you a moment. It seems that you are never home."

"Goodbye," said Dr. Hazzard, shortly, extending his hand to the young captain.

Betty looked at her uncle, then she echoed his words and actions: "Goodbye," she said, and extended her hand. The others did likewise. Captain Hal strode out of the room and made direct for the Hazzardville spaceport where the taxi could be expected to pick him up and whisk him to Washington all within a few seconds—And so he was on his way to volunteer for war before war actually had been declared.

When Hal had gone, Betty turned to the three conferees with a puzzled expression. "What I cannot understand," she pondered, "is why the combined spacenavies of three planets would be necessary to combat a freebooter with but three battlecraft at his command, and two of these of inferior size and armament?"

Before answering, Dr. Hazzard surveyed his pretty ward lovingly—indulgently. Then he explained:

"For the same reason, Betty, that many hounds might be necessary to run down three foxes with a great field to forage in. If we knew Quantok's base it would be easy for us to go and get him. As it is, he can swoop in from the far reaches of space and utterly annihilate any craft flying without adequate convoy. This, he can do, easily, before the officers or crew of such a craft realize their danger.

"The far reaches of space and the great speed necessary to space flying make possible such surprise attacks," continued the great scientist. "The darkness of space, too, is a factor. A pirate craft flying between its intended victim and the sun, yet out of line to cast a shadow on the victim, would present a dark or blind side. In other words the pirate craft flying under conditions, as described, is invisible save for a slight aura or corona. This is not easily distinguished by a look-out or observer. Now do you understand, my dear?"

"Perfectly," replied Betty, "and I believe I will retire now."

Although she did not realize it Betty's subconscious mind probably reminded her thus: "Hal is gone now, why stay longer? We need sleep."

Dr. Hazzard kissed the girl, and the others waved a good night to her as she left.

PIRATES OF SPACE

The moment she was gone the big Martian turned to Dr. Hazzard and said, "I know you will pardon me, doctor, but your ward, Miss Betty, interests my scientific mind most strangely. There is something altogether unearthly about her. I do not mean her beauty alone. I refer, as a scientist, to her traits, her characteristics, her entire general appearance. She has a slight resemblance to the people of Venus, yet she is not from Venus. Neither is she of the earth or Mars. She is utterly unlike any of the peoples of the known universe. Do not regard me as impertinent, please. As a scientist, I have a right to be curious—and I am speaking as a scientist. Who were the parents of that girl? Where in the universe *did* she come from?" The Martian's forehead was corrugated. There was no doubting his sincerity.

Anoda Vena, the representative from Venus, leaned far forward in his chair. The rapt expression on his handsome and highly intelligent countenance betrayed that he, too, was deeply interested in the history of this girl, Betty, whose name was the only earthly mark identified with her.

Dr. Hazzard looked at his guests and smiled a queer, half sad, half glad little smile. "There is no end to it," he said, resignedly. "Always the same questions arise. Usually I withhold the story, but it really is a matter of deep scientific interest."

"Gentlemen," he said after a pause as he arose and began pacing the floor. "The nativity and the parentage of my dear little ward are a mystery of the universe—a mystery so deep that it may never be solved—a mystery strangely linked to tragedy."

CHAPTER V

A Child of Mystery and Tragedy

DR. HAZZARD continued to pace the floor near his visitors. The changing expressions on his face were a study.

"Gentlemen," he began again, at length, "You have awakened memories—memories that are both pleasurable and painful. If it had not been for that tragic night I would not have Betty with me now. Yet I cannot look back on it all without a realization of the tragedy which accompanied her advent into this world.

"Betty's life story is strangely interlaced with the record of my own accomplishment. It is as though a daughter were sent to me to sustain me through the hardest and most gruelling struggle of my life."

The visitors from the far-away planets shifted in their chairs in nervous interest in the old inventor's measured words. It were as though they instinctively felt that the story of the strange, beautiful girl was of universal import. And so it proved many months later, when the civilized peoples of all explored planets were torn by a strife—a struggle which appeared at times too great for human ingenuity and stamina.

"It was when we first began using radio transmitted power for atmosphere craft," continued Dr. Hazzard. "I had just perfected this invention and had begun the erection of this laboratory and these foundries to produce weightless metal. The metal was to be used in the production of craft to meet the great and growing demand of traffic around the earth.

"I was no more than comfortably fixed here in my

home and laboratory in June, just eighteen years ago, when one night a terrific storm arose. The army of workmen took refuge in their construction barracks a mile above the laboratory and I held to my little cot here. I was hoping that the great storm would abate, but it became fiercer with each succeeding moment. It was as if the heavens were on fire and with each blast of terrific electric force drenching rain fell, driven with a fury by a gale of fiendish proportions. Flood waters from a cloudburst ran down the old mountain in torrents and I remember I was standing at the window breathing a prayer of thanks that our shelters had been completed before the storm had swept upon us.

"Suddenly, out of the roar of the storm, came a series of short sharp blasts, audible only between crashes of thunder. The blasts were accompanied by a scream of soul-racking intensity. I looked up to the east and a sudden great glare of lightning revealed a strange egg-shaped spacecraft, falling, as it seemed, out of the heavens. An instant later there was a frightful crash and the spaceship collided with the rocky side of the mountain not a hundred yards from where I stood at the window.

"Despite the roar of the elements, I determined to fare forth and see what could be done for the poor unfortunates who might still be living in the crushed shell of the strange spaceflyer. I managed to manipulate one of our searchlights so it fell full on the wrecked craft. Then I rushed bareheaded and coatless from the house.

"In one quick survey I saw that the spaceship was not of this world. It was a small affair, evidently built for cruising, and on its battered sides I saw a strange symbol—a rampant dragon of weird aspect, coiled around a tree of unknown species.

"The hulk was so terribly battered that I had little hope of finding life within. After some manipulation, however, I managed to pry loose a bent and twisted trap, using a loosened piece of the wreckage itself as a lever. Cold-lights were still glowing inside the twisted hulk and I beheld three bodies, crushed and bleeding. One was crashed against the control board. This was the body of a man. I reached it and found life extinct. Another, also a man, was lying prone. Death had evidently been instantaneous.

"A third body, that of a woman, I found in a bunk aft. The bunk had served slightly to break the force of concussion, but every bone in the body was broken. There were frightful gashes about the head and torso. The legs were torn and bleeding, but the bosom still rose and fell. There was yet life.

"As gently as possible I dragged this body from the crushed shell of the spaceship and out into the raging night. With great difficulty I managed to finally reach the door of my quarters. Carrying my precious human burden I laid it on my bunk. I began, with the thoroughness of a sympathetic and deeply interested physician and surgeon, to make an examination of the injuries.

"A startling fact became apparent within a few moments. The woman was about six or seven months with child. Her poor torn, crushed body was beyond my aid, but she might live for a few moments. It occurred to me that I might be able to save the baby.

"Because of her crushed hipbones I saw at once that a natural birth would be impossible. I decided instantly that another gash cut deep into the torn and mangled torso could not mean much under the circumstances. It

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was a matter of seconds. I had no time to wait for ether to act. I used a local anesthetic, applying it with a sponge and fairly bathing the parts in strong solution as I cut quickly and deep.

"More rapidly, probably, than any emergency operation had ever before been performed, I finished the work. Then I paused for an instant. I had, lying beside a dying mother, a beautifully formed but pitifully premature girl baby. The mother gasped out her own life in sacrifice as the girl baby's chest expanded with the first breath of a new life on a new planet. Gentlemen—a marvel, I might almost say a miracle of the universe had happened.

"I had saved a life and lost a life almost in a single minute earth time, but I was still far from being completely successful in my efforts. I realized that the baby would have to have perfect incubation to live.

"With speed that I am sure I have never equaled since, I procured a galvanized iron boiler and cut a square hole in the bottom. Then I turned it bottom side up on its lid and with a small electric laboratory torch I welded the lid on, hermetically sealing the boiler save for the door which I had cut in the bottom. I fitted the door with rings of bent wire to act as hinges. Into this I introduced electric bulbs and a thermometer to produce and register the exact degree of heat necessary to recreate, as nearly as possible, the conditions within a living, palpitating human womb.

"The mother died, but my hastily improvised incubator saved the child, whom you know now as Betty, my beautiful ward.

"I gave her my personal care and all of my time and all of my prayers, but the reward was certainly worth my efforts."

The old scientist paused for a moment with a preoccupied look in his eyes and ran his hands through his mop of snow-white hair. His auditors sat breathless with interest. Dr. Hazzard turned suddenly on his visitors and said:

"And now, gentlemen, comes the part of the story that will especially interest you as scientists, for it was through Betty's entrance into this world that my greatest idea was born.

"My radio flyer had been proven practical for flight within the earth's atmosphere at speeds never before attainable, but it was not practical, so far as we knew then, for flights through the vacuum of space. The reason was that the radio-transmitted energy was available only when relayed at intervals of from 3,000 to 5,000 miles. I believed that relay stations in space were an impossibility. Finally, however, I so perfected transmission that power could be transported on radio waves from 50,000 to 100,000 miles. Suddenly, an improvised incubator, which I had used to save Betty's life, gave me the idea of how to construct radio stations in space.

"It occurred to me that if I could produce living conditions in an ordinary tin container, I could enlarge upon the idea, constructing giant containers of weightless metal in the order of one mile 'linear' dimensions. It was the idea to have these giant containers towed to points of vantage along the space lanes and used as power transmission stations and actual cities of space.

"My idea, I believe, was sound, but we have been unable to carry it out because of the depredations of the bloodthirsty pirate, Quantok. Once he is out of the way we can begin flying our radio-powered craft in

space at a speed of 183,000 miles a second, the actual speed of light itself. You see my radio stations are simply large incubators in which I can produce earth conditions and make community life possible anywhere in the outer void."

Both listeners were deeply impressed and betrayed the fact by their demeanor.

"A most thrilling and unusual story and one of great interest to any scientist," commented the man from Venus.

"Certainly an enthralling account of an inter-planetary mystery plot," observed the giant from Mars. "And," he added, "was there nothing on the wrecked mystery ship that would throw light on its mission on earth or the place of its embarkation?"

"There may have been," pondered Dr. Hazzard slowly and thoughtfully. "I have often wondered myself, but the truth is I was so occupied saving the baby's life that I did not go near the wreck for weeks. The fact is, I hardly gave the matter a thought. The baby and my laboratory work occupied every second of my time. When I finally found time to visit the wrecked spaceship it had been drenched by the flood. It was so thoroughly muddled, trampled and ransacked by workmen, newspapermen and curiosity seekers generally, that it was practically denuded of all articles which might have helped to solve the mystery.

"I know, though, that newspapermen from Denver went over the ship carefully. They got together some small scraps of papers and 'scripts,' but these had been so scattered by the gale and drenched by the flood that they revealed nothing of a tangible nature. Some words in a language entirely unknown to earth dwellers were found, but even these were so faded and drenched as to be utterly impossible to decipher. The mechanism of the craft, too, was so twisted and impaired that it also failed to reveal any secrets. All we know is the nature of the metal of which the craft had been constructed. This was an alloy containing at least two metals previously unknown on earth."

"It is surely a most perplexing and baffling mystery," noted the giant Martian.

"Indeed it is," agreed the man from Venus, whereupon the three scientists retired. Had they known the mystery was to deepen on the morrow they probably would not have slept so soundly that night.

CHAPTER VI

A Strange Disappearance

WHILE Dr. Hazzard and his visitors were yet asleep Betty, whose dreams had been filled with vague visions of a nature which had tended to upset her usually cheerful disposition, arose and dressed hurriedly. She donned a simple costume for traveling, hurriedly tossed some other articles of apparel and toilet in a valise. Picking up the simple luggage, she ran to her foster-father's desk. This desk served as his "office," at times when he was very busy, and Betty knew he spent much time at it.

Betty sat down and with much pretty wrinkling of her finely chiseled brow she wrote a note. The text began:

"My Darling Daddy:" and it ended:

"I hope you will forgive me and realize that all

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is going to be for the best. Your loving Betty."

Betty placed the note in the very center of the desk and then ran out of the laboratory and down to the spaceport. She had not long to wait. An around-the-world flyer soon halted at the station and Betty hurried on board. Ordinarily the guards insisted that all passengers show tickets, but Betty was known, from early girlhood, by many of the spacecraft and airship men, who stopped on local trips at Hazzardville port. So the guard simply nodded to her as she climbed aboard.

The flyer was a local. It stopped at many stations on its way to New York, London and other European and Oriental ports on its way around the world to San Francisco and New York again, passengers boarding and leaving the carrier at every station.

When the conductor reached Betty she paid cash fare and then requested as a favor that he and the guard would forget that they had seen her. She was frank in stating her reasons and the conductor with a wise wag of his head and an exclamation of deep understanding agreed to her strange request.

"Believe me, Miss Betty, under the circumstances I will forget I saw you," agreed the conductor, "but as you were the only passenger who got on at Hazzardville I would advise that you pay fare from Salt Lake City where several other passengers boarded the craft."

Betty did as was requested. The conductor left her and soon she was lost in her own thoughts. The misgivings of her dreams had been dispelled by the morning sunlight. She was herself again taking happy enjoyment in her flight. Could she have looked back to the laboratory of her beloved foster-father she would not have been happy at all. For Betty had overlooked something.

In the mountains gusts of wind much stronger than zephyrs are common. Betty had not noticed that windows on both sides of the laboratory building were wide open. A gust of wind stole in one side of the building, lifted her note from her "daddy's" desk and carried it playfully out through the opposite window. In seeming childish enjoyment of its prank the wind caught the note and whirled it high, speeding it up the mountain side to the top where it fell into the bubbling lake of fire and was consumed.

When Dr. Hazzard missed Betty it was mid-afternoon, but he was not alarmed at the time. He reasoned that she had made a hurried trip to Denver probably to do some shopping and that she would return late in the evening. When she did not put in an appearance as expected and when the night and all the next day passed and she did not return, his anguish may be better imagined than described.

His visitors comforted him as did all the men at the plant, but he was frenzied with grief and anxiety. Early on the morning following Betty's departure radios throughout the universe crackled with a general alarm notice of her disappearance.

After days of brooding, almost maddening anxiety, a strange feeling of comfort stole over the aged scientist. He seemed to realize subconsciously or, if you will, spiritually that his ward was safe and would return to him. Otherwise he might have been greatly hampered in the performance of certain heavy and important duties, which the inner councils of the government already were outlining for him.

Within a few days after the general alarm incident

to Betty's disappearance the ether began to ring with the broadcast of the declaration of war by three planets simultaneously. The call to arms followed immediately.

Dr. Hazzard and his visitors were called to Washington to enter as an advisory committee to the War Board. The three scientists were experts on interplanetary navigation, transportation and other matters of outstanding emergency moment. Their presence was regarded as essential to any plans of war that might come up for consideration. The foundries, to which Dr. Hazzard had devoted his life, were left in the direction of his heads of departments, with the privilege of choosing their own "boss" from within their ranks.

As the war was not a matter for the army, save as defense forces on earth to protect rocket-fuel, ammunition and war plants and the general public safety, the army was not augmented. The Spacenavy, however, was recruited to a strength never before recorded.

That ominous tenseness that has gripped peoples involved in all wars from time immemorial seized the souls of the three great planets involved. The usual bustle of preparation was noticeable everywhere—the grief at leave-takings and the thrill of patriotic fervor sweeping on in unfettered glory . . . a tornado of public spiritedness and a unity of deadly vengeful purpose filled the land.

CHAPTER VII

War

THE three planets involved in the greatest struggle of all time to preserve interplanetary commerce were in constant radio communication. Conditions on all the planets were the same. It was a universe mad with frenzy of punitive war.

Declarations of war on the three planets were simultaneous. There was a concerted movement of all ships in the three spacenavies. At one universal command they rocketed out into space where Quantok, the cruel, crafty and bloodthirsty Martian pirate, had held sway for eighteen years simply because the field of his operations was so extensive that it had been impossible to run him down. Now the greatest triumvirate of the universe had combined to stalk him relentlessly. They were determined to fight, if necessary, to the last ship and the last man. It is little wonder that the earth ran riot with excitement, zeal and patriotic fervor.

At a given signal, flashed through all space, the Spacenavies of the great planets set out for their common hunting ground. Viewed through powerful telescopes from the earth the gathering of the fighting forces was a spectacle that the outer starry realms had never before presented. Rockets bursting in unison from a myriad of craft of all natures together with the natural starry heavens furnished pyrotechnics no dreamer of fantastic dreams could have conjured in his wildest imagination.

It was with a great show of satisfaction that the regular passenger and freight transporting lines announced that their regular liners would leave on schedule and under heavy convoy.

The earth spacenavy battleships were designated by the letter X and numbers 1 to 300. The ship X-13 with X-60 and X-200, of course, were missing from the array as they had fallen into the hands of Quantok the pirate. It was believed that these and the Venus ship were the

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only fighting craft he possessed. A sad and disastrous mistake this proved to be.

Captain Kane was assigned to the command of the X-4, the fourth largest fighting craft in the navy. Each ship, as will be remembered, was stepped back a number in designation as some new and larger craft was put into commission. Thus it was always possible to tell the size, the armament and fighting strength of each craft by its number and thus it will be seen there were only three ships greater in the Spacenavy than the battlecraft X-4, commanded by the famous Dr. Hazzard's nephew.

In the glorious taking off of the armada, Captain Kane's ascended from Washington as did the X-1 (flagship) and the X-2 and X-3. Other ships took to the space from various points and bases, all converging into a fleet at a point 100,000 miles from the earth's envelope.

Here a brief exchange of advice was carried on which amounted to a council of war and then there were maneuvers. These maneuvers, designed to test the accuracy of the pilots and engineers of the gigantic fleet, numbering some 2,000 craft, presented a spectacle never to be forgotten and never before produced in history of all the planets.

It was viewed with thrills and enthusiasm through the giant telescopes on all three planets, but was most plainly visible, of course, from earth. Those who had the fortune to view these maneuvers, naturally, were envied by their fellow men. No words can describe the spectacle. It has to be imagined.

It will be remembered that since the women won their right to equality in both the army and navy of the earth in the year 1980, these ships were manned by both women and men. The women had their own officers of equal rank with the men. The same was true of the craft of Venus and Mars and had been so for probably two centuries before earth peoples were forced to recognize the rights of women to serve and fight beside their men.

Where possible it was the custom on the ships to have married or betrothed couples recruited for such service. This was not compulsory. Single members of both sexes were in service and were now ready to fight shoulder to shoulder.

On his induction into the active war service Captain Kane had won the rank of Tilotik, a word borrowed from the Martians and a rank created after a study by earth engineers of Martian navy methods. This office was next to admiral and was available only to young men who had spent enough hours in space to constitute a fourth of their lifetime. They had also to qualify as expert space navigators and spacecraft engineers. They were supreme in command of their individual ship unless the ship carried an admiral.

The female Tilotik, while of equal rank on a craft, could qualify more easily. She had to be an engineer and to possess almost equal knowledge to that of the male of her rank, but, because of the motherhood element, her actual service in space was not regarded as important. Man was still supreme in that the female Tilotik had a voice in command, but orders were issued by the male. Their orders were passed along to the females by their Tilotik. It is true, however, that the word of the female Tilotik carried, in many instances, even more weight than the word of the male. This was the case particularly in the medical, commissary, and recreational activities.

Since embarking on a ship, that to him was strange, Tilotik Kane had not met the woman of equal rank on his craft and he was due for the surprise of his life.

It was during the maneuvers that a woman stepped forward and saluted. In the natty uniform of her rank she presented a picture worthy of a Michelangelo and all other masters who have followed him.

Tilotik Kane returned the salute and then looked down into a pair of blue eyes nestling under a riot of golden curls. These curls simply would not stay fixed under the jaunty navy headgear. Tilotik Kane almost fell to the bridge in surprise.

"I am to occupy this bridge with you," trilled a voice like the music of the spheres. The voice, the eyes, the curls, there was no mistaking. The next in command was Betty Hazzard.

"Why—why—why—how did you get here?" blurted Tilotik Kane.

"I just qualified, enlisted and used my uncle's name, to swing influence enough to be assigned to this craft."

"Your own scientific attainments would have accomplished it without influence," commented Tilotik Kane proudly and then he became the navy officer and so did Betty. They saluted briskly and went about their affairs without another word.

After the maneuvers all ships spread out to form a dragnet covering as much space as was commensurate with safety. The combined navy had to be in a position to converge if necessary, and yet had to guard three planets. It was without doubt the biggest job, the most astounding job, ever assigned to men and machinery.

It was accomplished by forming circles within circles with the flagship in the center. The outer ring of ships were the smaller and fleetier scout craft. They served to dart hither and thither in space in an effort to locate Quantok, the pirate, his craft and his base.

Orders were that Quantok, if possible, was to be taken alive and that his flagship under no condition was to be destroyed until it had been traced to its base. Somewhere in the vast void it was known Quantok had located and doubtless had conquered a planet rich in all materials needed to make his operations possible. The prime object of the drive against him was to locate and forever destroy this base as well as all craft of any nature which operated from it.

To tell the detailed movements of the fleet would be to detail a history of the war which is available to all in eclectic history. It will be remembered how in the early months of the war the forces of Quantok managed to get through the guard of ships and destroy the city of San Francisco with frightful loss of life. The horrors of the sacking of the Pacific Coast metropolis still serve to almost paralyze the senses of those who read of them in the records. No less terrible was the subsequent sacking and destruction of the capital city of Velspi, on Venus and the naval base at Krox on Mars, a location every nook and corner of which was as familiar to Quantok as his home dooryard. It was at Krox that Quantok got his training.

We draw the curtain over many of these horrors to follow the fortunes of Tilotiks Kane and Betty Hazzard. It was their idea which broke up the formation of circles early in the war. They ordered the formation into three lines guarding the three planets from the direction of outer space or if you prefer a more scientific designation—from the region of the asteroids.

Counting the ships that were used in these lines of defense and those used to convoy the regular space liners the Supreme Command of all the forces, Admiral Wentworth of Earth, had but a round dozen ships of heavy armament with which to attack Quantok's forces once he was located. These ships were the X1, 2, 3, and 4 of the Earth Spacenavy, V1, 2, 3, and 4 of the Venus navy and K1, 2, 3, and 4 of the Martian navy. In addition to this fighting force a large number of smaller and fleetier craft was used for reconnoitering as has been described.

Cut off from his raids on the planets, Quantok, whose strength was surprising but overestimated by him in his great egoism, made bold on the memorable October 19 to attack the combined navies of the universe or such part of this force as was included outside the planetary lines of defense.

On the date named Quantok came to the attack from the day-side of space, quietly, like the spirit of death. Only when his thermo and disintegration rays began to stab out like fingers of fate, did the allied forces realize that his three battleships had been augmented by hundreds of small fleet craft, so small and fleet, that they could not have carried crews of more than ten men each. Like a scourge of hornets these small craft came into the zone of battle. They resembled the tanks of the great World War of history in size and armament, but not in shape and speed.

They were egg-shaped, faster than any known craft and practically invisible. They darted hither and thither in and out around and about the great craft of the allied navies. Their network of deadly rays moved about at well regulated and highly destructive angles.

The heavier craft of the allied navy, once their commanders had regained their presence of mind, began to stab back with rays so powerful that the swarm of deadly gnats was fairly shattered. The tiny craft of Quantok began falling like boll weevils under gusts of poison gas.

But, in the meantime, the bloodthirsty Quantok was collecting his toll. The great flagship, X-1, came athwart a network of the disintegration rays and before it could maneuver away it blew up in a cloud of dust with the loss of every soul on board. The X-2 and X-3 threw a blast of rays into the void created by its disintegration and a half a hundred stinging hornets either blew up in flimsy dust or else were melted to shapeless metal masses—to become meteors in space.

With Tilotiks Kane and Betty Hazzard on the bridge the great X-4 came into the breach at this point and one of the three great battlecraft of the pirate blew up with one vivid vibrating puff of pulverization.

There was a roar of great enthusiasm within the X-4 at the moment. It was followed by a sickening tear at the vitals of those on board. All the top rockets of the X-4 exploded at once and the craft plunged thousands of miles, belly first, through space.

Betty caught at Kane's arm.

"They missed us," she said calmly.

"You mean we missed them," said Tilotik Kane breathlessly.

"Just what happened?" breathed the girl.

"When we trained on the pirate craft, or an instant later, half of Quantok's little busy bees swung to train on us. We would have been dust to be scattered by passing craft for eternity if we had been a split second

later. No time for orders. I just had to get away from there. With one little touch of the button I exploded all the rockets I had on top and just dropped as far as the combined recoil would carry us. Now we will shoot a similar blast from our keel and get back into action."

"Aye, aye," said Tilotik Betty her eyes beaming on her peer in command.

Another sickening pressure which brought all on board to their knees and the great X-4 was back in the zone of battle. She noted that in her absence the X-2 had disappeared.

Like firemen playing a battery of hoses, the X-4 began sweeping space with everything she had in the way of rays. So fast and furious was this barrage that it was impossible for a moment to tell what toll was being taken. Then, suddenly a radio from the X-3 said that neither Quantok nor any of his fleet was anywhere to be found. He had retired as suddenly as he had attacked.

"That can be explained," radioed Tilotik Kane in reply. "His small craft can carry little fuel. They are efficient only for a short time and then must make it back to their base for more power. But believe me, Glorious God, they are all hell while they last and it probably won't be long before they are back again with all their stingers set for action."

A strange fact about the battle was that Quantok had seemingly ignored the Martian battlecraft and that all from that planet had escaped. Could it be that he actually had scruples about destroying people of his own nativity? In the light of what happened at Krox, where whole garrisons and a city full of noncombatants were slaughtered, this hardly seemed reasonable.

News-and-Views commented on this fact in its story of the battle and in describing the plunge of the X-4 it said that "the ship of Tilotiks Kane and Betty Hazzard had escaped destruction by a breath."

In this way Dr. Hazzard, who had been busy every minute, learned the whereabouts of his beloved Betty. No more fervent thanksgiving probably ever reached Heaven than that which welled from the lips and heart of the white-haired old scientist.

CHAPTER VIII

Strategy

WITHIN an hour after the battle the story of Tilotiks Kane and Hazzard and their exploit, after accounting for a great number of the enemy's lost ships, had reached the farthest reaches of the known civilized universe. They immediately became the outstanding heroes of the war.

When the matter of appointing successors to Admiral Wentworth and his feminine peer in command was discussed, the names of Kane and Hazzard immediately came to the fore.

This brought a storm of protest from the disgruntled political interests which stood always in opposition to the Hazzard family and its strong following.

This misguided minority came forward with fangs bared when it was suggested that Kane and Hazzard be made admirals in supreme command of the allied fleets. It was swept aside, however, by the overwhelming support given the candidates by the peoples of Mars and Venus. As had been the case through all history the disgruntled selfish minority was forced to retire

with colors drooping, if not positively dragging in the dust. As usual the disgruntled minority wondered just how it all had happened.

In the next two battles of the war the new Admirals Hazzard and Kane did not figure. This was fortunate as their fighting fleet had been weakened and they had not seen fit to strengthen it at the expense of the lines of craft that were guarding the planets.

In a surprise attack Quantok and his forces, now reduced to two battlecraft but augmented by swarms of "hornet" craft, bore down on the line protecting the planet Venus. Admirals Kane and Hazzard kept in touch with this battle. In fact, at times, they directed it from a point far away in space. The battle was short, sharp, but hardly decisive.

The attackers were repulsed and forced to retire, but only after a frightful loss of life and armament on both sides. Ten battleships of the second class with the forces of Venus were blasted and nineteen melted with all on board. On the other hand the swishing, sweeping rays and disks of destruction emanating from the allied fleet off Venus accounted for hundreds of Quantok's "hornet" fleet. These tiny craft with their human freight disappeared from space forever like snowflakes in sunshine.

An almost identical attack and with like results was attempted by Quantok against the Martian line. All speculation that Quantok was inclined to favor craft of his nativity was dissipated in this battle. He attacked with a ferocity even greater than in previous battles. The Martians, while losing heavily, were able to hold Quantok and his "hornets" until the latter had to leave the field evidently to refuel.

Quantok's retiring fleet could have been followed and harassed from the rear during any of these retirements, but Admirals Kane and Hazzard had warned against this as it would have meant weakening the forces of defense and leaving vital positions unguarded. The earth admirals suspected that Quantok was possessed of a force in reserve, a conclusion that later proved correct.

Any general or admiral will admit that good guessing has won more than one battle and Admiral Kane proved an admirable guesser or, if you prefer, his was a keen intuition.

In a council of war he reasoned that the next attack of Quantok would be directed against the Earth line of defense. He believed Quantok had more small or "hornet" craft than he had fuel for at his base and that this had been the reason for his original sacking of the rocket fuel factory in Canada and his subsequent raids on San Francisco and other points. Also it had been his reason for trying to break through the Venus and Mars defense lines.

To checkmate the suspected next move of Quantok he finally consented to weaken all the planetary defense lines by ordering 100 battlecraft from each to draw close to his position in space and to stand by. These craft were ordered not to engage in the fighting, unless all his ships were destroyed, but to remain ready to perfect a strategy which he believed would win the war and render Quantok and his flagship *hors de combat*.

His own ships were carrying far less fuel than was needed for any sustained maneuvering, so he began releasing them one by one and sending them earthward (the nearest ports) for fuel.

He was overjoyed when Quantok remained inactive for two months and allowed all but one of his ships time to refuel.

Then just as Old Sol was seen to blaze from Mother Earth, giving the pirates of space their night side conditions under which to attack, a report was radioed forward that Quantok had been sighted telescopically some million miles away. His advance was plainly marked by the coronas showing about his fleet. The number of the fleet could only be estimated.

Soon the fleet could be seen from the high-powered telescope aboard the X-1, formerly the X-4 and now the flagship. The televue while ominous was more highly spectacular than can be described in the words of the languages of all the planets.

Steadily earthward they sped, like a great torchlight procession out of the fiery depths of hell. They were all unmindful that craft from the Mars and Venus lines were closing in on them from all directions.

SUDDENLY, as they approached the woefully inadequate fleet of Admirals Kane and Hazzard, the fanning, writhing metal and heart-searing rays of destruction began to stab out into the night. In a spiteful sputter of all the power available the giant rays of the admirals' fleet spat out derisively to meet the oncoming horde. The doughty X-1 was manned by men and women—most expert of all the universe in handling concentrated destruction. The rays from the X-1 cut, slashed, dipped, swung, flashed and fanned at the oncoming enemy. Rays began finding marks on both sides.

Just as the Quantok fleet swung into range the rays from the X-1 splashed into a fiery inferno against the sides of the one remaining dreadnaught of Quantok's fleet, sending it up in a fitful piteous spurt of dust. Gunners who hit this mark smiled while their girl companions actually giggled, for such are the emotions engendered by war. The flagship was left alone with the hornets.

Years back in dim history a great general had described war with one word, "Hell." He should have lived to see a wide stretch of heaven ablaze with death-dealing shafts and to have seen hundreds die at one blast of a ray gun. Then he might have had added "War is Hell with trimmings." The trimmings, in this instance, were being stitched on with needles of flame sticking out from a swarm of craft, like quills on the backs of porcupines.

Admiral Kane was bobbing his great craft about like the proverbial cork on the ocean in his efforts to dodge the sputtering devils of death. At the same time his gunners kept fanning and brushing the heavens with rays. The craft on which Quantok rode in the most desperate endeavor of his career to wreak vengeance on a hated civilization seemed to be charmed. It, too, bobbed and bounced about. It was dealing destruction by the very maneuvers it used to dodge it.

The little "hornets," it appeared to Admirals Kane and Hazzard, were doing most of the work. Both admirals stood on the bridge—and at the brink of eternity smiling. Any instant might be their last. They were existing, by some kind quirk of fate, in a nest of death-dealing squirming serpents of light and any moment might mean a fatal sting. But they smiled as they continued to fight side by side for the right to live and enjoy life unhampered and unmolested.

During the height of the battle Admiral Hazzard looked full into the eyes of Admiral Kane. There was something wistful but hardly hopeful there. It did not seem possible to either that they could long escape this Niagara of hissing death.

Admiral Kane reached out for the briefest second imaginable and pressed the girl's hand.

"If it's good-bye, well then good-bye," he said, "but we will die fighting."

"It's only the beginning," she replied confidently with a new-born hope in her voice. The words were ended with a jerk as the X-1 plunged in a wild downward swerve. It came up again instantly with a sweep of its top lights that sent a half hundred hornets hellbent for eternity.

Both admirals knew that they were surrounded by fleets from the defense lines of three planets and these craft were not fighting as per absolute orders. They both knew that Quantok's end was nearing, but how they themselves could escape destruction in that bubbling cauldron of death was a problem too deep for human thought or analyzation.

Suddenly it was seen that the flagship of Quantok—the old X-13 of the Earth Spacenavy and a fighter to test any man's skill—was singling them out for combat. Dodging the first volleying barrage of rays, both the earth admirals leaped to the fray. Because of the swarm of "hornet" craft, they had been unable to reach this craft and they had been fairly bursting with the desire to do so. Betty and Kane returned to the battle, after the first wild plunge to salvation, with everything turned loose. Their rays fought, feinted and stabbed, with Quantok fighting back just as fiercely. Giant splashes of light belched out into space as rays broke on rays. They were fighting in a close duel of crossed swords and face to face as fencers might. With giant rays they parried and thrust.

For some time they fought thus in blinding light. The fighting became too wild and hysterical on the part of Quantok to make good judgment an asset. It became sheer insanity. It appeared that Quantok, fiend of the skies, had gone stark mad in his desire for victory at any price. His "hornets" were being blasted from around his flagship as corn might pop in a popper. His losses were terrible to contemplate. No one knew his strength. Admirals Kane and Hazzard could only vaguely guess at it, but one thing seemed obvious and that was that such fighting could not continue for long. Yet Quantok continued to fight, mayhap, in sheer desperation. Never on land, sea, air or in the great outer void had such a devastating, horrible, deadly battle been fought.

Admiral Kane realized with a quick intake of his breath that his ship, the X-1, was fighting alone. The other ships of his personal fleet had been swept from the skies one by one. His was one craft fighting a great squadron of craft in space. His heart fell within him. He looked over commiseratingly to his girl pal to see if she realized the condition. One glance was enough to prove to him that the girl knew it only too well. She answered his look in words.

"If we can just get Quantok, it doesn't matter how soon we go after that," she said steadily and resignedly.

"The orders are to get him alive," he responded, "but it's too late to consider any such orders now. One of us is going to hell. I am about to ram him with all forward

guns spraying rays at capacity." There was both desperation and determination in his voice.

"Aye, aye," replied the girl simply and the order was given, but fate in one of her whimsies saw to it that the order was never carried out. The great fighting ship of Quantok disappeared from sight. It was not destroyed; it just let loose all its top rockets and plunged. Quantok did just as Admiral Kane had done in the previous battle. The Earth admirals, realizing what had happened, duplicated his maneuver and plunged after him, but he had had a second's start and had made the best of it. He disappeared from the field of strife.

Two reasons accounted for this. His hornets were running out of fuel and he feared to fight alone as the pitiful remnant of the earth's forces had done. He evidently suspected that Admiral Kane was about to close in and the coward in him asserted itself.

But this retreat was not to be like the last. It was impossible to follow craft that were practically invisible when inactive, but Admirals Kane and Hazzard had worked out a little trick. This promised further excitement if not complete success.

A radio sputtered out the words:

"Objective accomplished."

It came from the fleet which had been drawn from the planetary line defenses and which had been inactive in the battle.

"Our strategy has worked," said Admiral Kane to Admiral Hazzard.

"That only means more fighting," replied the girl, "Get the location and we will motor to another and let us hope a more successful carnage. It is no time now to let them get their breath. They may have more bees in their little hive."

This time it was Admiral Kane who said "Aye, aye."

CHAPTER IX

The Planet of Horror

THE strategy which Admiral Kane had taken so much care to accomplish was the result of a sudden idea. It had occurred to him when he realized that the hornet craft were so small that they had to return often to a refueling base. He believed that it would be a simple matter to drive one of these ferocious little fighters into the open, surround and capture it. This little trick he reasoned would lead to the discovery of the location of Quantok's base and make a direct attack on his stronghold possible.

"It will mean the beginning of the end of the war," he had told himself so he forthwith ordered a number of ships from each planetary line to form into a fleet with this one and only purpose in view.

When he received the radiogram that the strategy had been accomplished he was overjoyed and paced the bridge in his exuberance.

Betty sensed that something important had happened. "Good news?" she asked, drawing close to her chum and peer in command.

"The best ever," said Admiral Kane. Then he told her. He ordered that the little stinger of space be brought forthwith to his flagship. This was done.

After surveying the doughty little prisoner which had been nosed alongside his flagship by a convoy he believed he could get the tiny craft aboard and was able to do so.

It was hauled through a trap in the side of the flagship just as a launch might be hauled on board an ocean-going yacht, back on dear old Earth. With it came the commanders of the fleet which had accomplished the strategy. The man was of Venus, a brave and attractive fellow. His peer in command, who was also his wife, was beautiful as are all Venus women.

The man reported that his fleet had formed a hollow cube as directed in the plan of the strategy and had caught the tiny spaceflyer within this snare. He said the little gnat had tried to fight its way out of the trap with everything it had in the way of armament. Finally it exhausted its fuel and had to stay in its prison. The surrounding fleet had then simply nosed in and held the little hornet as snug as the proverbial bug in a rug but not so comfortably.

Admirals Kane and Hazzard believed the crews of these gnat flyers were about ten men, but were surprised to find only three souls aboard. And such a crew as it proved to be and what this crew finally revealed—

The little peanut, as the Venus captor referred to it, held secrets of a nature to make civilization quail. A guard was called forward when the hornet crew was ordered out on the deck of the X-1. The officers present shuddered when they beheld these nondescripts fare forth. They were ordered to the cabin at once where a parley began.

The commander of the little craft was a renegade Martian, of wicked snarling visage and rude demeanor. Near him stood a handsome and perfectly formed little fellow who resembled a man of Venus but was not of Venus. Around his neck was a metal band. The third member of the crew was a monstrosity, a human quadruped, covered with heavy black shaggy fur. Its four feet were hand-like, its nose dog-like, its eyes deep-sunken but intelligent. At the moment the monster's eyes were pathetic. Not only were these eyes intelligent they were highly expressive and were expressing fear and pleading as plainly as eyes could speak. The forehead was high and the ears like those of a spaniel only smoother, maybe, more like those of a bloodhound. He walked on all fours to the cabin and then stood half erect, apparently with difficulty, beside his fellows.

Admiral Kane faced the commanding Martian and said:

"Well, Goliath, what have you to say for yourself?"

Admiral Kane had believed the fellow would understand English and he was not mistaken. The giant fairly growled out his reply:

"You can't torture any information out of me."

"You will not be tortured," assured the admiral, "but you may face a firing squad in the event that I find you too uncommunicative."

"Me, no care," and these three words ended the interview so far as the Martian was concerned. Admiral Kane ordered him placed in irons and taken to the brig. Then he faced the little fellow.

"You understand English?" began the admiral.

"Very little, but I am well versed in Martian," replied the prisoner with an air as brave and frank as even an earth dweller could desire.

"Good," said the admiral, changing to the Martian tongue, "I am in a position to offer you your life in exchange for information, which we are determined to get whether you give it to us or not. I see by the inscription on the neck band you wear that you are a slave. I

will not only give you your life but will guarantee your freedom as well if you talk freely and truthfully. Lies will insure your death—"

"I have no reason not to talk, except to save my family from torture and death," said the prisoner. "My life means nothing, my freedom much. Slaves of Quantok are enemies of Quantok. You and I meet on common ground, but unless Quantok is defeated, nay, unless he is forever crushed, my loved ones will pay in torture for anything I may reveal."

"I am beginning to understand," said the admiral with a glance at Betty whose eyes were glazed with pity for the poor serf.

"What sort of a person is this?" then asked Kane pointing to the quadruped.

"I am aware you are ignorant of our little planet," was the answer. "He is Yarth, a dagnan, or if you will a dogman of Dagnarth."

"A what?" exploded Betty.

"I am Farnald. I come from Dagnarth, the largest of the asteroids, a planet twice the size of your moon and half the size of your earth. A small island or continent on our planet is populated with these dogmen. They have developed a larynx and can speak. They are lovable, loyal, faithful and good when they are properly directed. They have nearly all the human traits and are skilled manual workmen. Under Quantok's regime they have been forced to use all their animal instincts and have been more ferocious than wolves. This, I assure you, is quite against their natures."

"But—" drawled Kane, puzzled, "we have no knowledge of the planet of which you speak."

"It is, to you, invisible—our planet—we took good care of that. We desired no outside communication whatever. We were too weak for war and were lovers of peace. I am proud to be a Dagnarn, sir, even in captivity. Quantok found us. He had engines of war. We had no weapons, nothing but implements of peace. With his ray guns he defeated us in a frightful war. We were practically helpless. But we would have fought on. There was only one move that beat us. Quantok made merry by capturing our small children and slicing them up and teasing them with rays before our eyes.

"We could not see much of this sort of thing without yielding. If you do not win this campaign against Quantok my children's torture will pay for this information I am giving you"—and the dogman blinked his expressive eyes and nodded his head as if he understood. His elongated jaw dropped. His mouth was open. He panted evidently from the excitement caused by his companion's fervent recital. The panting was more dog-like than human and Kane for the first time beheld the dogman's teeth. They were the sabre-shaped canine tusks of a wolf. Appraising the dagnan or dogman, Kane estimated that he could not be more than half human, and must be highly dangerous when his animal instincts were in the ascendant. In contrast the wholly human being was symmetrically muscled, handsome, gentle and highly intelligent.

Admiral Kane broke in when the speaker paused, "Your planet is named?"—he suggested.

"Dagnarth. Dag is our word for God. Our planet was consecrated by its people to spiritual service, but when Quantok succeeded in subduing and subjugating us he turned all the man power to the service of evil. He used all humanity on Dagnarth in the production of our

small, fleet, type of spaceships and to the manufacture of the Martian type of armament with which to equip them. For eighteen years we have been forced to work double time, often on half rations. So much man power was used to produce war engines that few were left to produce food. When we objected, even mildly, we have seen our loved ones subjected to slow torture. In case of a refusal to work or to yield, in any event, death by torture to some loved one resulted. You cannot imagine the horror in which we have lived, worked and prayed for eighteen long years—years in which every hour seemed an eternity of suffering and woe. There is no worse state for a proud intelligent people than abject slavery.” The speaker’s voice was trembling with emotion. He paused a moment then, in a low voice, he added, “Our women have been shamed. We have all been ready to die yet we have dared hope for succor and have toiled and prayed on.”

Betty was biting her lips.

“I quite understand,” said Admiral Kane. “Then you will lead us to this stronghold of Quantok.” This was not a question; it was stated as a point in fact.

“Yes,” said the Dagnarn, “but my own people will be forced by Quantok to battle to repel you. I quail from seeing so many of my people slain, but better death than slavery.”

“I have a plan,” vouchsafed the admiral, “and I believe it will minimize losses among your people. They all have radio?”

“Yes, but every second now is precious. My story of invisible Dagnarth has aroused your curiosity, but if you would attack Quantok while his fleet is refuelling and re-conditioning you had better hasten.”

Admiral Kane desired more facts but the last utterance of the Dagnarn electrified him.

“You have the freedom of the ship,” he said to the Dagnarn, “but Yarth, the dogman, what of him?”

“He will be docile with me.”

“Then he has the freedom of the ship, too.”

“I will be near when you desire any further information. Need I express my gratitude?” concluded Farnald, the Dagnarn.

“Your eyes and those of the dogman, too, have already done so,” replied the admiral.

An instant later space was filled with radio flashes and a great fleet, converging from earth, Mars and Venus, was descending on Dagnarth, stronghold of history’s most fiendish master-criminal.

Finally, when the asteroid was but 20,000 miles away it came into view on the television lens. It appeared a land of beauty—yet of horror unspeakable.

CHAPTER X

The Old War Horse

ADMIRAL KANE radioed an order for all craft to assemble at this even distance from Dagnarth. He called Betty, Farnald and Yarth into conference.

“I have a plan,” he said “which I believe will save useless slaughter.” Then turning to Farnald, “Your people, you told me, all have radios?”

“Yes,” said the Dagnarn, “there is no household, craft or building without a powerful receiving set, but I anticipate your plan and it will not operate.” He paused.

“You would call on all Dagnarns and Dagnans to attack their oppressors as you attack from space. This is impossible. All radio on Dagnarth is under remote control. Any message designed to undo Quantok would result in the switching off of all sets from one central point. Your call to arms would only be begun when all radios would be silent.”

“Then we will strike at once!” said Kane, “and may God protect the innocent ones caught in the slaughter. Before I give the order to attack, there is just one question. How does your planet maintain its invisibility?”

“By a great glare of lights which float 200 miles out from the planet. These great lamps are weightless—lighter than our atmosphere. They glow perpetually with cold light and without renewal. We borrowed the secret of these lights from a small insect which is silver-colored yet is invisible in utter darkness or in sunlight.”

“Oh,” exclaimed Kane, “I see. We too have a silvery insect on our planet that is invisible at night, but we have never fathomed its secret. It is called the silverfish. But this is no time for a discussion of entomology. We fare forward!”

Like a great avalanche, the combined fleet swept to within 5,000 feet of the surface of Dagnarth. The massed battlecraft almost shut out the sun as it hovered over the dayside hemisphere of the little planet.

Television screens pictured a scene from the surface of the planet that resembled a fish-hatchery stirred with a paddle. Everywhere was darting, feverish activity. The hornet fleet did not rise to meet the enemy, but giant rays began darting upward like jets of lurid light from a thousand active volcanoes. An answering jabber of rays bent sullenly surfaceward.

A tenseness filled the atmosphere. Orders were that the attacking fleet should be careful to destroy no craft or structure unless such destruction was deemed positively essential.

At a command of Admiral Kane, giant thermo and disintegration rays were swept around all airports and fuel storage magazines. Particular attention was paid to wiping out the enemy’s supply of rocket fuel as rapidly as possible.

These great storage yards were located with the help of the Dagnarn. Then it was an easy matter for the attacking fleet to send a few ships to soar above and sweep the plants with bold swishing strokes of ray guns. They were brushed out of existence much as a painter might swing a brush to block in his background.

This was not accomplished, of course, without resistance. The heavy mortars guarding these spots would flare with fountains of defiant flashes, but one by one they were reduced to pulverization or melted into metal junk. The loss of life necessarily was frightful, but care was taken not to wantonly slaughter non-combatants.

The idea of Admirals Kane and Hazzard in this campaign was to put the enemy out of a condition to resist as soon as possible. The objective was the Government palace and radio tower. The admirals wished to capture the palace and the general radio control and broadcast station with the idea of notifying all denizens of Dagnarth that the fleet was a friendly one destined to end the terrorism of Quantok.

Admirals Kane and Hazzard ordered their fleet to draw yet closer to the surface. The movement was concerted and exact. The great hollow shell of craft that

inclosed the invisible planet simply squeezed in with the compactness of a rubber glove.

Incidentally the movement was highly dangerous, for it brought the entire fleet in range of smaller and more numerous destruction-ray batteries on the surface. It caused renewed and diabolical activity on the part of Quantok's defensive forces for an instant—just an instant.

Then a most unexpected thing happened!

All radios sputtered an S-C-D. (Special Code Dispatch.)

This called for a lull in operations. The great fleet was ordered to withdraw. This movement was accomplished with the precision that could be found only in the perfectly trained forces of the three great planets. The dispatch came over in the special family code of the Hazzard clan. No one could understand it but Kane and Betty. They looked at each other in surprise mingled with joy!

"I am on cruiser X-192, which came up with the earth-line forces. I desire immediate transfer to the X-1. That ship will rise to a point five miles out of range of all surface guns where we will pick it up and I will board it.

Dr. Hazzard."

A few minutes later, at a point within the atmosphere envelope of the invisible planet, Dr. Hazzard stepped aboard the X-1, mounted to the bridge and affectionately greeted his nephew and his foster daughter.

"Well, well," he said almost jovially, "Did you youngsters think you were going to have this war all to yourselves? You can't run away from me. Here I am. I had to be with you, but I am not going to interfere with the way you conduct your campaign. A most surprising thing has happened and that's my own private affair, but I have to be landed at the palace on the invisible planet as soon as possible, so go ahead with your war."

Admiral Kane introduced Farnald and Yarth. "I had better acquaint you with what we know about the invisible planet——"

"No need," assured Dr. Hazzard, with a wave of his hand. "I have had a sound-and-sight set tuned in on this bridge ever since I left the earth, just after the first space battle. I have heard every word and have seen every movement here. We start even. Let's go. But wait! Farnald had better tell you something that I know that you do not know!" Then turning to Farnald. "Explain to them the status of your aged monarch and conditions as they exist in the royal palace."

Farnald drew in a breath and began. "Our aged king who ruled by kindness had knowledge of the planet, its politics, geography and affairs that Quantok needed. Torture failed to bring this information so Quantok ordered a truce. He gave the king his castle and allowed him to retain his crown, although he is but a figurehead. King Torod accepted these conditions as he desired to live and work and pray for the emancipation of his people.

"Quantok did not want the Royal Palace anyway. He desired larger and more luxurious quarters where he could maintain his enormous harem made up from native captive girls and women he had abducted from raided spaceships——"

"That is all I wanted them to know," said Dr. Hazzard. "I learned it through my sound-and-sight set, by training it on the King's apartment. I got in direct

touch with him and had a long two-way conversation. He awaits our coming, but has been unable to get control of the radio, the control room of which is located in a tower between the two administrative buildings." Dr. Hazzard turned to Admirals Kane and Hazzard. Placing a hand on the shoulder of each he said, "Now my children go ahead with your war, but remember you can't win unless you succeed in landing an army. Get every craft down on the surface and give 'em Hell!"

"I hesitated because of the great loss of life among the Dagnarns and Dagnans," explained Admiral Kane.

"I know it," replied Dr. Hazzard, "but better dead than slaves. Fortunes of war, my boy, fortunes of war. I said give 'em Hell! I am not butting in, just giving you the benefit of an old man's experience. You can't kill a rattlesnake with kindness."

"As usual, you're right," agreed Admiral Kane as he looked quizzically at his peer in command.

"Still the old boss," she observed affectionately and then assorted varieties of the prescribed hell began to break loose!

"Squeeze 'em," ordered Admiral Kane to all his craft, "squeeze 'em like an anaconda crushes a goat."

The net began to tighten!

Rays played in the atmosphere of the little planet like sparks from a great grindstone. It was hell and no mistake. It proved momentarily disastrous to the attacking forces. The squeeze brought the great fleet into range of all surface mortars. Great ships were being puffed and whisked into nothingness at a most alarming rate. Betty trembled visibly in contemplation of the frightful loss of life.

Dr. Hazzard grasped just the tips of her fingers and applied a consoling pressure. "It cannot last long," he comforted. "We have destroyed all their fuel supplies. It is their only ammunition. Their lights must soon go out!"

"God grant it," breathed Betty in fervent prayer.

The great ships were now fighting desperately—diabolically within a few hundred feet of the surface.

CHAPTER XI

The Landing

THE resistance offered by the surface forces was still stubborn and terrific. Every form of surface weapon that had weathered the frightful attack from the skies was brought into play in one final desperate effort to prevent the landing of the forces of the triplanetary invaders.

The anaconda squeeze of the triumvirate, however, was of such titanic force, that the years spent by Quantok in preparation for just such an attack proved to be wasted years indeed. Right it appeared was again to prevail over the cruel and frightful forces of evil. Despite a veritable inferno of slashing, sputtering destruction rays from the surface, the invading ships soon began to bump the ground on the once invisible planet of dread.

One by one they squeezed their way to the surface, bumping in gentle regular and rhythmical array. At the radioed command of Admirals Hazzard and Kane they formed a hollow protected line of march or lane to the great palace of rose quartz. The palace now shimmered in the light of the cold illumination from the artificial stars of this new-found planet—until now following its

orbit unknown, a thing of mystery—a stranger in the family of celestial bodies.

Other craft from the tri-planetary forces were ordered to surround the radio tower in a wall to protect the landing forces. This was possible because of a great plaza or open parked circle which extended in symmetrical landscape for some three-quarters of a mile in all directions from the administration buildings.

Kane and Betty in a breath caught the beauty—the magnificence and architectural grandeur of this new and strange planet. In their breasts welled a dual and deep resentment against the dastardly Quantok, whose great cruelty and greed had turned this celestial sphere into a planet of horror—a visible and material hell among worlds.

Forces of Earth, Mars and Venus began pouring out of the great spaceships ready for the advance towards the tower, the palace and the Administration buildings—these were the immediate objectives of the landing forces.

The advance was not to prove easy. The invaders were met by madly fighting forces of the enslaved souls they had come to save. The Martian renegades, headed by the diabolical Quantok and his slaves, the Dagnarns and Dagnans, began using every force at their command to repel the advance. It was clear that the renegade Martian leaders desired to protect the tower at all costs and prevent Admirals Kane and Hazzard from broadcasting the real and kindly nature of the invasion.

The renegade Martians and the graceful natives of the planet met the advance with rayguns, but the fighting methods of the dogmen were a sickening revelation.

Admirals Hazzard and Kane, at the head of the forces pressing forward toward the great tower, beheld a great dogman fall upon a giant invading Martian. The dogman pinioned the Martian's arms and legs to the ground with four great hand-like claws. Then the dog jaws opened and closed clamp-like on the throat of the Martian. There was a lurch and a jerk of a shaggy doglike head and the Martian's throat was torn open with sabre tusks.

The sight was ghastly, but neither the man nor the girl turned away. It was war!

The advance pressed on over bodies left torn and maimed by the snarling, yelping dogmen, all around were little mounds of dust and ashes that had been human forms before the blasting needles of rayguns had found their marks.

The guard at the tower was the pick of all Dagnarth. The fighting there was furious—hellish. Both sexes engaged in this frightful melee. Each man picked his man and each woman her woman for deadly hand-to-throat combat.

Kane and Betty were battling shoulder to shoulder towards the tower entrance, where the elevators to the sending room would carry them aloft. Farnald and Yarth were at their heels.

A Dagnan sprang at Admiral Kane . . . his jaws were distended and his tusks bared. The earthman met the attack with a fine sparkling needle of light from a raygun and the poor, doglike, half-human form puffed into nothingness.

The advance went on. Betty and Kane with the ever faithful Farnald and Yarth pressed forward. Finally they made the tower and fought their way up to the sending room. Kane was forced to puff out the lives of a dozen

faithful guards and operators who held the elevator doors and mechanism against the invaders. There was no time to try to explain to these poor men that the very soul of the planet depended on the success of the invaders.

Kane with Betty close at hand grasped the universal switch which opened all radio receiving sets on the planet. Yarth took the air and with an eloquence born of the first hope to spring into his breast in a decade voiced his message of glad tidings.

The people were quick to get the message and to understand that they had been duped by Quantok and made to resist their friends in devilish conflict. Runners were sent into the ranks of the Dagnarns and Dagnans calling on them to blast their commanders dead and to lay down their arms.

THE war was beginning to subside in all quarters save at the very gates of the palace, where Quantok was making a last stand with a concentrated force of renegade Martians and poor, misguided, hypnotized, but nevertheless powerful dogmen.

To this point of hellish conflict rushed Kane and Betty. Following close at their heels were the ever faithful Farnald and Yarth. They were jostled by milling throngs among which hundreds were already beginning to throw away their rayguns.

An instant later they were in the thick of the fighting at the palace portals. Wildly battling forces surged around them. Kane stabbed to the right and left with deadly rayguns held in either hand.

Suddenly his eyes beheld the giant form of Quantok. The fiendish Martian stood in arrogant smugness, a hellish smirk on his visage, giving commands. Kane leaped for the fiend! They grappled!

The earthman was no match in real brute strength for the giant. Quantok seized the Admiral in a great bear-hug, pinning Kane's arms to his body. Slowly the giant Martian beat the form of the earthman backwards with the idea of snapping his spine.

Betty was about to spring to the side of her lover when she was engaged by a hideous mongrel hag of a dogwoman. The hag was snarling forward toward Betty with her jaws wide open, her fangs bared. She was a sight to strike terror to the bravest heart. Betty ordinarily might have turned, sickened by the sight. But this was war and Betty a warrior. Betty turned the needle of light of her raygun on the monster and puffed out the hybrid life.

Then Betty sprang to the aid of the man she loved. She reached his side and pressed a tube to the heart of Quantok at the instant when it seemed that the backbone of Kane must surely snap. A click as the button of Betty's raygun found contact and Quantok's hold on Kane loosened and he sank to the ground. Betty had been careful only to paralyze Quantok. She had no idea of killing him. It was her will that he should live to be executed legally as a penalty for outraging all the laws of the Interplanetary League of Nations.

Seeing their leader fall prone, the other fighters of the Quantok forces began to fall back, the dogmen snarling and the Martians and natives muttering in surprised wonderment.

The fighting all along the line had resolved into separated individual tussles. These died out, one by one, like embers.

The war was over, but Dr. Hazzard, like the wizard he was, still held a rabbit in his high hat of destiny.

When Betty and her lover mounted the steps of the great palace they found Dr. Hazzard sitting on the top of the flight awaiting them. He had brought a cobpipe from some remote hide-away in his jacket, and was blowing earthly clouds into a new but friendly sky.

"We'll talk to His Majesty, my children," he said, "and I can tell you now that you will be surprised." With this he blew a great gust of mellow smoke skywards and crossed his legs in an attitude of comfort and peace.

Farnald and Yarth had withdrawn to a discreet distance and were waiting command of their new-found friends.

"Not just yet," interposed the admiral, "I am returning with Betty to the Tower. There is a message I would broadcast to all the people. Then I will return here and we will take up the matters of interplanetary adjustment with the king."

"Have it your own way," said Dr. Hazzard, as he lolled back comfortably. So Betty, Kane, and Yarth made their way through the milling but now friendly crowds to the great tower shimmering in majestic beauty against an azure sky.

The elevators were not manned, but Kane had no trouble running a cage to the top and he stepped into the broadcast room with Betty at his heels.

He threw the great switch and briefly, with Yarth acting as interpreter, he outlined on the air the purposes and accomplishments of the invasion. He called upon all the people to seek the protection and seclusion of their homes and to stand by and await further news and instructions to follow a conference of the friendly invaders with His Majesty, the King. Then Kane dismissed Yarth and the lovers were alone at last.

When he turned to Betty he found her gazing out over the city from the great windows of the tower.

He moved slowly to her side. It was their first opportunity to view their newly discovered land. The beauty of the town is difficult to describe. The administration buildings of rose quartz occupied the center of the great plaza, as has been described. Flowers of brilliant hue were revealed in the far corners of the park in spots that had escaped being trampled over during the battle.

Beyond the plaza streets were arranged in circles extending out to the limits of the city. These circular streets were intersected by straight cross streets cutting the circles like spokes in a wheel. Monorail car lines, hung on single supports like bridge-lamps, were doing a landoffice business, as the people returned to their homes.

Other people evidently connected with the administration were seen to be converging in orderly array on all sides of the great plaza.

Kane moved close to Betty and took her hand.

"You are a brave girl," he said, "and you have been through a great deal. I hope you have not suffered too keenly."

"I have known not the slightest anxiety except for your safety," she said, and her warm, soft shoulder brushed his own.

In an instant he had her in his arms and was crushing her to him. She yielded with a tremor of intense bliss and raised her lips to his.

"This, then, is my reward," he murmured.

"And your victory," she added, "the surrender is complete and unconditional."

After a brief heaven of this sort Betty said, "Come, we must return to the palace. Daddy will be waiting for us."

CHAPTER XII

The Surprise—Conclusion

THE lovers found Dr. Hazzard awaiting them still seated on the top step of the great palace flight. He had drawn a great crowd and was attracting no end of attention. He was visibly a little impatient.

"The King has requested our presence in the throne room," he said, "so you youngsters had better step on the gas."

"Hitting on all eight," responded Kane with a grin and the trio marched into the great palace flanked by a royal escort, sent by His Majesty to attend them.

Ornate and magnificent are the two words to describe the great palace interior and must suffice. Within the palace order had grown quickly out of wild excitement. Within the throne room the array of courtiers was as formal and as majestic as though the nation had known no strife.

The visitors from the distant planet, Earth, advanced slowly. The King noted Betty and Kane and seated them at his right and left. An interpreter was at hand and explanations and expressions of gratitude and understanding were in order.

Dr. Hazzard, a little fagged, threw himself down on the lower step at the base of the throne. There he awaited patiently for a lull in the conversation of the King with the young people. He was still smoking his cobpipe and still wearing his battered fedora. These were his uniform and his equipment. Royalty spelled nothing in his studious, laborious life of service. His battered hat was his own crown. In meeting the King he was meeting a peer, for he, too, was a king—a king of engineering—a king of all science.

Finally Dr. Hazzard arose. He removed his battered headgear and bowing to His Majesty asked permission to speak.

Briefly he told the story of the tragedy that had brought Betty, as an unborn baby, to earth. The King sat agast.

"Early in the war," he concluded, "I recognized your type of spaceship as being the same that brought Betty to our world. She is from this planet. Will you solve the mystery?" he pleaded simply, addressing the King and drawing his foster daughter into his arms.

The King, his eyes moist, stepped from the throne, while a great hush fell over the assembled throng. The King advanced to where Betty was standing in the loving and protecting arms of her foster-father. To the surprise of all His Majesty gathered the doctor and the girl into his own arms.

"She is my own beloved granddaughter, God be praised!" said the King.

Betty turned and kissed the aged Emperor. Tears glistened in her eyes. Admiral Kane stood and looked on wonderingly. Then the King explained:

"When Quantok began the campaign to enslave my realm," he said, "I regretted for the first time that we had held ourselves aloof from the other planets. There

was no place to which we could turn for aid. Finally my son, the Crown Prince Preeda, agreed to spirit a ship from under the watchful eyes of Quantok's guard and attempt the journey to Earth. He chose his own closest chum and schoolmate to accompany him—a youth of great courage. His bride of only two years insisted on going along, although she was in a delicate condition. They never returned and we never were given another chance to send out a ship for help. This adopted daughter of yours and this granddaughter of mine, you see, is the real queen of this realm. The throne is rightfully hers. The people will demand that she rule them.”

There was a great shout at this announcement. Dr. Hazzard was visibly pleased. A great light shone in his fading eyes. “I knew,” he murmured to himself, “that my Betty could be no less than a queen.”

In the great throng was one who could not take the news with rejoicing. Admiral Kane stood apart. His head was bowed, his eyes sorrowed. The announcement was tragedy to him. How could he, with the rank of an admiral, ever hope to marry a queen.

Betty was quick to realize the thoughts that were torturing her lover's poor, tired brain. She withdrew from the arms of her doting guardians and went to the side of her man. She took and squeezed his hand. Then she whispered to her newly found grandfather.

The aged King voiced a command and within a few moments the great throne room was all but emptied. Then turning to his friends he said:

“These children are tired. They are hungry, too; heart-hungry and hungry for food.” A male and a female attendant escorted Kane and Betty to a private room where a delightful meal was served and where they could dine alone. The room was one that looked out over the beautiful palace grounds where an army of laborers were now engaged in removing reminders of carnage.

Beyond was another unpleasant scene. Quantok and those of his renegades who had survived were being publicly executed.

Kane, who had looked out, pulled the blinds. Automatically the room was flooded with the soft glow of cold light bulbs, concealed in the ceiling.

He sat down discouraged. Betty, like a tired petulant child, crawled up in his lap and nestled.

“It's no use,” Kane half sobbed. “You will never be able to withstand the clamor of the people that you take the throne and rule here. I cannot marry a queen.”

“No? And why not?” pouted Betty giving him her lips. “You are my king. A queen is only half a queen without her king. I can confer on you any rank I please. In your own world you are a king among men. It is my royal order that you prepare yourself for a wedding at which I am to be the bride. Disobey me and I will throw you into my darkest dungeon and then I will move into the dungeon and live there with you,” she was

slowly brushing his curly hair back from his brow.

“You will live in the light and I will return to my work and my people,” said Kane, but his voice carried no conviction.

“You will obey my royal command!” said Queen Betty and her voice carried the utmost conviction. Then she added with a little chuckle, “You may as well learn to obey me, for I am the sort of a girl who will be very, very exacting with a lover. You do not have to say or do a thing. I will fix everything up and I will do the explaining to my people. You are the savior of this planet. My people will be proud to have you for their king—almost as proud as I will be.”

The young lovers did not take leave of each other until an attendant came and assigned them to their individual, beautiful and luxurious sleeping quarters. As they kissed and parted they promised to meet at breakfast. Betty's foster-father and her grandfather, the King, intruded on her privacy only long enough to kiss her good night. She was a much beloved maiden, and one who might in time become dreadfully spoiled, were it not for her natural queenly bearing and composure.

Days followed days. The lovers were living in a heaven. Betty kept her promise to fix everything up. Dr. Hazzard suggested that Admiral Kane be decreed a “prince among men.” As such a prince his marriage was regarded as fitting among the simple, yet highly learned and artistic people of the realm.

And as the days followed days the planet of horror became a planet of peace, plenty, and unalloyed happiness for all peoples. Under a protectorate of Earth, arranged by radio through the good offices of Dr. Hazzard, the planet was assured of a future free from strife.

Within a few months the aged King died in the arms of his granddaughter. Betty took the throne with her king.

Dr. Hazzard had to return to earth but promised to visit Dagnarth as often as possible.

The young king and queen knew nothing but bliss. On earth Kane had political enemies. On this planet of peace he was idolized with his queen by the people. On Dagnarth he had only friends. He was free at last from petty earth jealousies.

On earth Kane is referred to as the astronaut—the space-gob—who became a king.

On Dagnarth he is called the Royal Lover.

From the turrets of the great rose quartz palace Kane and Betty can look out over a prosperous peaceful city. Beyond is a countryside teeming with productive activity. They delight in this view, standing side by side, hands clasped.

We leave them standing thus. Betty turns to Kane and their lips meet.

“My king,” thrills Betty.

“My queen,” responds the former Admiral Kane of the Earth Spacenavy.

THE END

Sky Cops

By Harl Vincent and Chas. Roy Cox

Illustration by MOREY

THE life of a patrol sergeant of the Interplanetary Police is no sweet song—any way you look at it. Dangers there are aplenty; long hours of grueling labor; lonesome, monotonous patrols in the blackness of outer space. Often there is death lurking out there in the heavens; occasionally, too, the grim spectre is met near the surface of one of the inhabited planets, Mars, Venus or Terra. But there are compensations—sometimes. Much growling and complaining is to be heard in the rank and file of the I. P., but you never hear of one of them quitting his job. "Once a sky cop, always a sky cop," is their time-honored boast.

Michael Aloysius Dooley, (God help you if you ever called him anything but "Mike"), was a patrol sergeant attached to Station T-9, the ninth I. P. base outside the atmosphere of Terra. Fourteen years he had been on the force, with never a black mark against him. Cited for bravery a dozen times and inordinately proud of the tiny medals he wore hidden beneath the lapels of his coat, Mike still had not advanced beyond the rank of sergeant. That was one of the contributing causes to his periodic outbreaks of growling.

Out here, ninety thousand miles from his terrestrial home, all days and nights were much the same. The huge sphere that was Station T-9 was always in sunlight—one side of it at least. That was something, too, for three of the terrestrial stations were always in the shadow of the body they guarded. Gloomy jobs they had at those bases! Mike always said he'd quit in a minute if they ever tried to transfer him to one of the dark stations. 'Darn tootin' he would!

The tiny scout ship that Mike used when on duty was his first and only love. He knew as much about its internal mechanisms as did his mechanic, Joe Tripp, and much of his own time was spent in polishing and lubricating its many parts. For that matter, Mike knew as much about the entire system and workings of the I. P. as any man connected with it; he was like that, thorough, painstaking, studious. He openly boasted that the "Shooting Star," as he called his scout ship, was the fastest in the service. Proved it, too, on more than one occasion. One particular race to the moon was a matter of history, which Mike did in thirty-six minutes flat, at a time when the distance was well over a quarter of a million miles, beat his nearest rival by eight minutes

on that trip, since when his bets had not been covered.

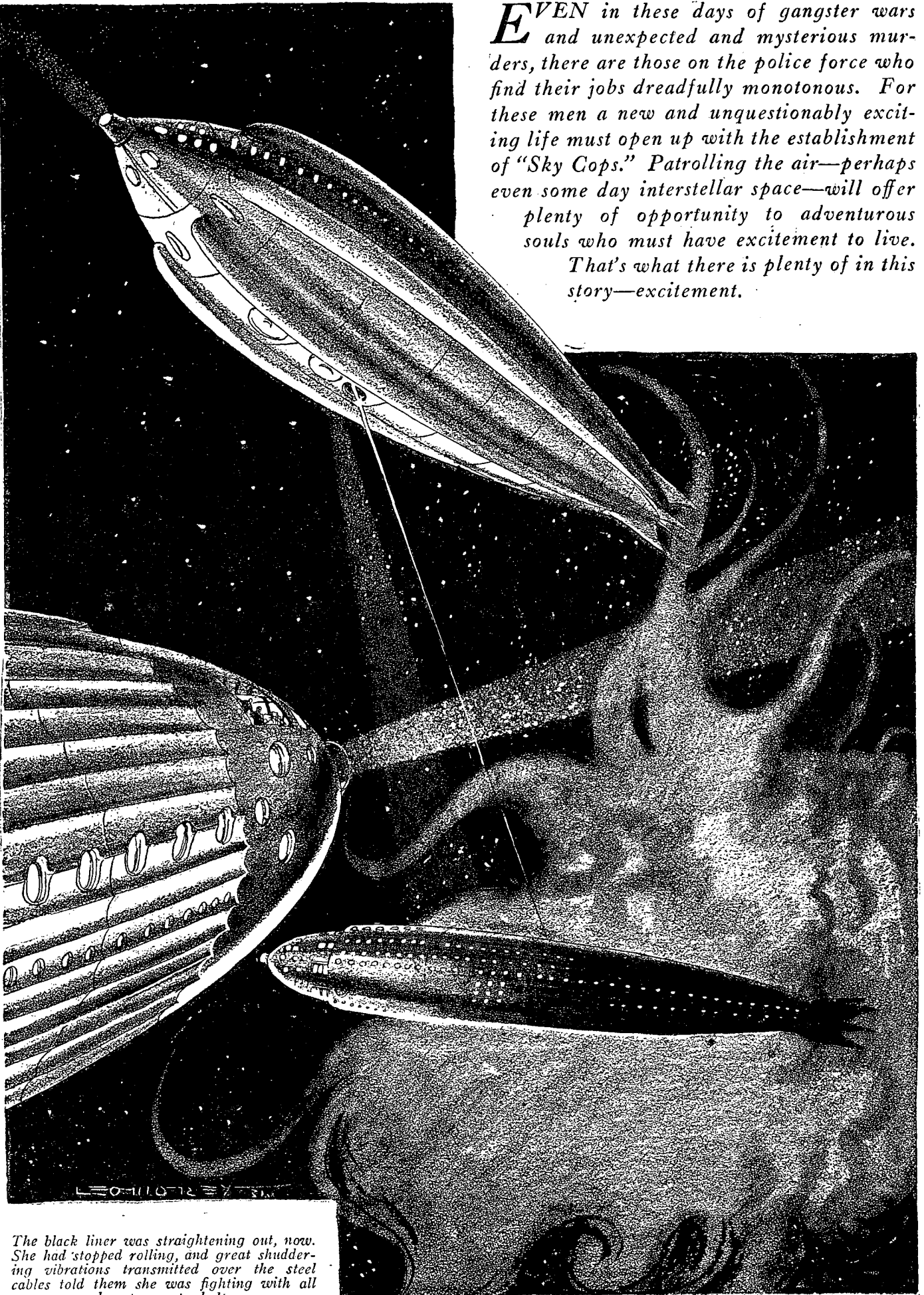
Tonight—it was night by the station chronometer, though the circular window of Mike's air-lock faced almost directly toward the blinding orb of the sun—he was especially grouchy. Alone in the air-lock which housed the *Shooting Star*, he was going over the hull plates of the little vessel to make sure no joints had been sprung during that last encounter with one of the black smuggling ships of Venus. Satisfied that all was well, he patted the curved side of his beloved vessel and strolled to the window to look around while he nursed his grouch.

For a time, he gazed silently into the velvet blackness of space with its myriad jewels of clear, brilliant light. Tiring of this, he turned to the viewing screen of the ultra-telescope, manipulating its controls to sweep the heavens in a wide arc. He paused when the orb of Venus swung into view, focused it sharply, bringing its surface close and scanning the visible portion for signs of untoward activity. There were none. A touch of the control blurred the planet's image, and he swung the searching ray of the instrument in another direction, caught the dim outlines of that unnamed monster of space, which was the wonder and the nemesis of the I. P. and of the entire system of space navigation.

Further readjustment of the controls brought to view a white blob of matter that seemed something entirely apart from and foreign to the ordinary sights of the heavens. The milky monster of space! A great mass of raw protoplasm, it seemed, writhing in perpetual agonies of tormented motion. At times, flattening to an enormous disc, it seemed almost limitless in width, thousands of miles across. At others, it was a wriggling serpent, its length immeasurable. Always it stretched forth waving tentacles of its mysterious composition, reaching, twining, grasping for whatever might come within its reach. Dreadful energies emanated from its bulk, energies that attracted metallic objects from many miles away, should any such approach it. Woe be to the space ship that came close! Mike shuddered in contemplation of the mystery, as he switched off the power and turned again to the window.

A giant space liner swept into view, paused alongside for a few minutes. Mike amused himself trying to decode the message its turret blinker flashed to the station; but it was secret stuff, and he could only guess

***E**VEN in these days of gangster wars and unexpected and mysterious murders, there are those on the police force who find their jobs dreadfully monotonous. For these men a new and unquestionably exciting life must open up with the establishment of "Sky Cops." Patrolling the air—perhaps even some day interstellar space—will offer plenty of opportunity to adventurous souls who must have excitement to live. That's what there is plenty of in this story—excitement.*



The black liner was straightening out, now. She had stopped rolling, and great shuddering vibrations transmitted over the steel cables told them she was fighting with all her power to help.

at its import. Then the huge bulk of the cigar-shaped liner drifted away, and with quick acceleration, drove into the blackness and vanished from view.

Mike turned from the window, stared at his reflection in the mirror over the wash-stand. A mighty honest pair of brown eyes looked back from the glass, wide-set beneath a high forehead that ended where it should, in a thick crop of curly, chestnut hair. Glad he wasn't a baldy like Joe Tripp, anyway! Smile wrinkles showed in the bronzed, leathery countenance, but there were grim lines, too; lines that had dug themselves in as time went on and his record of performances lengthened. Just now he screwed his features into a grimace and voiced his disgust with everything in general.

"Helluva life!" he jeered, stripping off his dungarees and preparing to clean up. "Got myself all steamed up when Cap Larrick was bumped off a year ago, but a lotta good it did me. Thought I'd get his job, sure as shootin', an' they ship in this slick guy, Brown. Even then I thought he was just a fill-in, and I'd soon get what was comin' to me for fourteen years o' hard work. But not the I. P. Brown must have a drag somewhere. Reckon he'll be here for the rest of his life. Nice fat chance for me!"

Mike kicked his greasy clothing into a corner and stretched to his full six feet three. He knew he was as hard as iron. There wasn't a man in the station who could match him with the gloves or on the mat. The new Captain was the easiest of the lot, too.

"Hey, Mike!" came the voice of his mechanic from the inner door, "what's wrong with you? Aren't you ever going to get any sleep?"

"Sure now, I am that," grinned Mike. "Right away, too. What are you doing around so early?"

"Had enough. I've slept five hours since our last trick."

"Go on with your kiddin', you old son-of-a-gun. Always a bear for the hay, eh?" Mike made a grab for the skinny little mechanic, swung him from his feet to an undignified position atop the steel locker.

"Cut that out now!" growled Joe, climbing from his perch. "You big bum! Always tryin' to show how strong you are. I'm not kiddin', either. You gotta hit the hay. You're slated on the big board for the three o'clock patrol."

"Who's teamin' up with me?"

"Brownie himself!"

"Damn!" said Mike, fervently.

Joe grinned delightedly as he ducked the friendly punch aimed at his midsection. Captain Brown had entered the air-lock and was watching them with an amused smile.

"Hello, Cap," grunted Mike, saluting.

"How are you, Sergeant?"

Twenty pounds lighter than Mike and two inches shorter, the Captain still was a fine figure of a man. He wore the uniform of his rank with a dignity that was unmatched by any other officer of the force. His keen gray eyes seemed to bore into Mike's very soul and to read his thoughts and feelings. Joe took the occasion to sneak out of the room.

"Did you know," asked the Captain, "that you are slated for the three o'clock patrol with me?"

"Yes. Joe told me."

"Better turn in then. We'll both need sleep. We're going after Rolenski tonight."

"We're what?" demanded Mike. "Say that again!" "Fact," reiterated Brown. "We're going after Rolenski tonight."

Mike brightened visibly. This Rolenski was the most notorious bandit of the solar system, a smuggler of radium and a tough baby if there ever was one.

"Had a heliogram from Headquarters," continued the Captain. "Said that his flagship is leaving the base on the other side of the moon tonight and will land a couple of million dollars worth of radium on Terra."

"Where?" snapped Mike. "Didja get all the dope, Cap? Just where he'll land, I mean."

"Arizona. Out on the desert. Don't worry about it. Go get your sleep now and be ready at a quarter of three. I'll have the map, and everything."

"Worry, hell!" exploded Mike. "I'm tickled pink. I always did want to lock horns with that bozo!"

Captain Brown smiled enigmatically at the sergeant's enthusiasm as he led the way to their cabins.

MIKE was in the mess hall five minutes ahead of time. His eyes glistened in anticipation. Another patrol had just come in, Ferris and his mechanic. They looked all shot.

"Where you guys been?" asked Mike, helping himself to a generous portion of the stew.

"Terra," said Ferris. "Scouting around in the desert. Rotten night down there, brother."

"Yeah? What you looking for in the desert?" Mike was careful not to speak of his own knowledge. The I. P. was strict that way.

"All I know is that Cap told us to keep a sharp lookout for a space ship with five green lights up top. Found it, too."

"Bring it in?" snapped Mike.

"No. Our orders were to report position only. We've got it, on a map the Captain gave us."

"Good work, Ferris," commended the Captain, as he came in and took his place at the head of the table. "Let's have a look at it."

Ferris handed over the map, and Brown scanned it closely. Mike watched him expectantly.

"Well, Mike, we're all set, as soon as we finish our chow." The captain tossed the map to the sergeant, who forgot to eat as he examined its markings.

"Lousy weather down there!" said Ferris.

"We should worry!" grunted Mike, as he resumed eating with much gusto.

Captain Brown laughed. When he was like this, Mike almost admired him. But sometimes he just looked and looked and didn't say a word. These were the times Mike disliked him most, and somehow he was suspicious of him, too. Didn't know why, but he was. Tonight though, everything was jake, and he was glad they were going out together.

Quickly the meal was finished, and the two men made for the berth of the *Shooting Star*.

In the hull of the great sphere that was Station T-9 there were twelve compartments which connected with outer space. Perfect air-locks these were, each with hermetically sealed inner and outer doors and each holding a space ship ready for instant launching. Of the twelve, all excepting one were scouting ships similar to the *Shooting Star*. The twelfth vessel was a cruiser that carried a hundred men and exceptionally heavy armament.

Mike carefully sealed the inner door of the air-lock as they entered. The nose of the *Shooting Star* was against the forward and outer door of the compartment, where its operating levers engaged with the opening mechanisms of the heavy hinged cover which separated them from the vacuum of outer space. He followed the captain into the vessel and there sealed its miniature air-lock before opening the valve which allowed the air to escape from the launching compartment. With the oxygen generators of the little vessel functioning, the hiss of escaping air from its enclosing air-lock worried them not at all.

With the turn of another lever the outer door opened and a brilliant image of the heavens sprang into view in the periscope screen of the *Shooting Star*. Far below them shone the huge green orb of the world they were to visit—Terra. It seemed to fill the heavens at this distance. Mike experienced a sudden pang of homesickness. Long time since he'd had a furlough!

The gravity screens were deneutralized and the *Shooting Star* dropped like a plummet into the depths that terminated at the great uprushing globe that was Terra. Full power on the attractors now and acceleration was terrific. Mike was impatient. At this rate, the ninety thousand miles that separated them from the mother planet would be covered in fifteen minutes, only about half the time it would take them to get down safely through the air that surrounded the earth. That part of the trip could not be speeded up, though. Nature had taken care of the matter of atmospheric friction and no efforts of the scientists had been effective in minimizing it to any great extent.

"Here, Mike," said the captain, extending a flask, "have a drink. You'll need it."

"What you got?"

"Chulco."

Mike never had tasted the fiery distillate of the Martian herb. A few times he had tried the impotent light wines doled out by the terrestrial government. But this Chulco stuff! He's heard of its power.

"Okay, Cap," he growled, "if you say so." But when he tipped up the ornamental container, he was careful not to allow too much of its bitter contents to drain down his throat.

The tiny potion burned his innards with a sudden, overpowering force. Then its effect was gone; his head was clearer than before. He dropped the *Shooting Star* into the earth's atmosphere at a speed that sent her internal temperature to the danger point.

"Never said much to you, Cap," he said, "but I reckon you've guessed how I feel about things. They hurt: a lot, too. Sore'n hell at you for a while."

"That's all right, Mike. Things'll be easier for you after tonight."

The vessel was slipping into the lower levels of Terra's air traffic, encircling the globe at better than a thousand miles an hour. The refrigerating system was being taxed to the utmost, but daylight was fast disappearing as they traveled eastward over the Pacific Ocean. Lower California slipped away beneath them. They followed the Gila River for a few minutes.

Captain Brown opened the ports and soon the hot breath of the desert assailed them. Howling winds drove the fine sands in pelting surges that reached them even at their altitude of more than a thousand feet. Mike was scanning the area with many references to the map.

"There they are, Cap!" he breathed, finally.

Five tiny green lights beckoned to them, five lights in a line that could mean only the topside lights of the vessel they were after.

"Drop alongside," ordered the captain. "We don't want to arouse them."

"Aw," grumbled Mike. "Let's rip 'em open with the disintegrator."

"Not yet. Hold everything until we have a look."

"But that's Rolenski's ship, Cap." Mike spat disgustedly. "You said so yourself."

"I know. Keep your shirt on, though. Maybe we can take him alive."

So Mike circled into the driving wind and dropped the *Shooting Star* to a sweet landing. Something didn't seem quite right to him, but who was he, to question his captain?

It was a tough night on the surface. Mike held tight to his service pistol as they fought their way to the slim vessel that loomed through the swirling sands. One light showed; a circular hatch was open at the side of the vessel. The ship wasn't much larger than the *Shooting Star*.

Suddenly a brilliant beam of blue-white light bathed them in its blinding radiance.

"What the hell?" exclaimed Mike.

A squat, husky figure stepped into the line of vision.

"Put down your pistol!" hissed the captain.

Something was funny here—damn funny. The more he saw of it the less Mike liked it.

"Who's this guy?" demanded the stranger, looking straight at Brown. "We can't have too many in on this deal."

"In on what deal?" snapped Mike, stopping just behind his captain.

"He's all right, Roly." The captain was speaking, and his voice dropped to a whisper. Mike couldn't quite get the rest of it and the grip on the pistol butt tightened.

"What're you guys pullin' off?" he snarled.

The bright glow of a hand flash blinded him. Somebody laughed.

"Everything's okay, Mike," explained the captain. "Just leave this to me. This is Rolenski himself. Never saw you before, so he's a bit wary. Just stick to me, buddy. I gave you a phony line tonight about this smuggling business. Truth is, the whole outfit at T-9's been in on it before, and you'll find Roly damned liberal. Just keep your trap shut and you'll get yours, too."

Speechless, Mike watched as the husky stranger counted off a sheaf of thousand dollar bills. Twenty grand! Cripes—it took a flock of dough to keep Brownie quiet, at that!

"Now, Roly," said the captain, "beat it."

In a flash Mike was at the entrance of the strange space ship. He peered through its air-lock into the control cabin. Evidently Rolenski was alone. Mike blocked the way of the stranger as he endeavored to enter the vessel.

"Not so fast, big boy!" he snarled.

A pair of handcuffs flashed bright in his hands. A sharp click, and one wrist was encased.

"Mike!" shouted Captain Brown, "what the hell are you tryin' to do? Didn't I tell you that we're friends, and that everything's fixed?"

Mike was too busy to answer. This Rolenski was like an eel. He squirmed and fought with the fury of a

caged animal. His free hand caught Mike a blow on the temple that momentarily had him groggy. Then the fireworks began.

"You will, will you?" grunted Mike. "Not this time, baby. There!"

With each jerked-out word he let fly a fist, a fist like a ham. Not for a second did he relinquish his hold on the free end of the bracelets. Brownie was closing in, but Mike wasn't worried about him. That little matter could wait. Smack! Right on the button! That was the last one the squat smuggler needed. He rocked on his heels, slumped to the ground without a moan. There was another click as his free wrist was cuffed.

"Now, damn you," snarled Mike, as he turned to meet the rush of his superior, "we'll finish this business."

But a shrill signal from the *Shooting Star* brought them both up short in their tracks.

"The etherphone!" gasped Cap. "I'll answer it."

"Like hell you will. I'll answer it myself." Mike's right flashed forth once more and the captain measured his length beside the still form of the bandit.

A moment later the victorious sergeant was in the control cabin of his own ship. Headquarters was calling! Cripes! Another ship caught in the milky monster of the heavens! He was to report at once at T-9. But that crew there, were they trustworthy? Cap had said they were all in on this deal of Rolenski's. Well, by God, he'd go back and run this expedition himself. Maybe get fired, but what of it?

He tumbled from the outer hatch of the *Shooting Star* just in time to see that Cap was helping Rolenski into the entrance of his own vessel.

"Hey you!" he yelled. "As you were. You're both prisoners. D'you understand that?" He sprang towards them.

Brown dropped his burden unceremoniously, met the infuriated sergeant half way. His right found an opening, landed fresh on Mike's eye, which rapidly assumed the hue and proportions of a "shiner." It infuriated the sergeant, who swung his left from his shoe tops, caught Brown on the side of the head. He went down, but not out. As he staggered to his feet, he fumbled for his pistol. Mike's hand sought his own. If that was what the skunk wanted, he'd shoot it out with him. But no, he couldn't kill the captain. It just wasn't in the book. Deliberately he aimed low and Brown came down under the shock of the heavy slug as it struck him in the leg. His hands were up now and he was calling for mercy. Mercy! Why, the snake deserved to get it through the guts where it'd do him some good!

What to do? G. H. Q. was calling for the *Shooting Star*. Cap Brown was supposed to command the big cruiser of T-9 on this treacherous trip out into the skies. People, perhaps hundreds of them, were in danger of their lives out there. A horrible death awaited them if their ship could not be dragged from the clutches of that awful monster that lay between the orbits of Venus and Terra. What to do? Cap was crying over there. Damn baby! Suddenly Mike walked over and unlocked Rolenski's hands.

"We'll settle this later," snarled Mike.

First he threw Rolenski in through the air-lock of his own ship, then Cap Brown, who was holding his knee and moaning with pain, after him.

"Damn swine?" raged Mike. "Got to let you go—for now. The I. P. has one duty more important than

bringing in smugglers and traitors. Lives first! There's a ship out there in space, being sucked into the milky monster! You know what that means, Cap? Y'oughta be there yourself to run the cruiser when she goes out. But you won't be! I'm going to do it. And believe me, I'll get you two birds later, if I have to scout the whole damn solar system. Now beat it!"

He slammed the outer cover of Rolenski's air lock and raced for the *Shooting Star*. A quick glance into the mirror showed an eye that was badly swollen and discolored, but still functioning. That would have to wait. There was a job to be done. He yanked his vessel into the air, started the return journey.

Station T-9 was ablaze with light when he reached it, but all compartment covers were closed excepting his own. The *Shooting Star* slipped into her berth with the ease that only an expert pilot can secure. In a moment the outer cover was closed and Mike's manometer showed that air pressure was filling the compartment. He tumbled into the outer space, while there was still not more than fifteen inches of mercury showing on the column. But a quick gasp filled his lungs with the rare air and he tore at the bolts of the inner door with one hand, his pistol in the other.

The entire force awaited him in the corridor. Joe Tripp was there, and Ferris, Trank, Davis—the whole bunch.

"Where's Cap?" asked Joe.

"Never mind Cap!" roared Mike. They all thought he had suddenly gone haywire, but he was waving that pistol in a determined manner. "Into the cruiser, all of you!" he barked. "I'm in charge of this trip. The first guy that interferes gets it in the middle and I don't mean maybe. Get going, now!"

"Easy, Mike," whispered Joe. "What's wrong with you?"

"Shut up!" snapped the sergeant. "What I said goes for you, too!"

He prodded his friend with the muzzle of his automatic. A swell bunch of buddies he had! In with the biggest crook in the universe! Well, they'd go straight for one job, anyway. He'd see to that.

"But Mike," persisted Joe, "what's it all about?"

The cruiser was out in the blackness of space, now, her crew sullen but tractable under the menace of Mike's weapon. On, on they drove, straight for the sun's flaming orb.

"You know what's the matter," grated Mike. "It's that damn Rolenski. Cap told me. Every mother's son of you is in on the rotten deal. Knew he was landing a flock of radium tonight and letting him get away with it."

"Aw, Mike, you're crazy. Brownie's a damn liar. You ought to know your own pals better than that." His tone was sincere, and the sergeant regarded him thoughtfully.

They were at the disc of the detectoscope. The operator searched the heavens astern for signs of reinforcements. The cruisers from T-3 and T-7 should be with them. G. H. Q. was calling again—heliographing now—and asking for their position. Then, there in the disc, they saw the T-3 cruiser, not a thousand miles away.

"I don't know," said Mike doubtfully. "Maybe I'm nuts, but I saw this Rolenski slip twenty grand to the captain. They offered to let me in along with the rest of you. Said I'd be taken care of, too."

"What'd you say?"

"You know damn well what I said. I pinched 'em both."

Another message was coming through from G. H. Q. The T-7 cruiser had been called off the job; not working right. A flash on the infra-red ray receiver showed a strange call. It was from the foundering vessel; they had given up hope. A hundred and ninety passengers on board, they reported.

"Boy, this is a tough job!" exclaimed Mike. "Hope we're in time!"

"Sure we are," assured Joe. "But Mike, lay off the suspicions of the outfit, will you?"

Joe looked at him so pleadingly that it seemed ludicrous all at once. Mike laughed suddenly; boisterously. Darned if he didn't believe the lad.

"Guess I was wrong, Joe," he admitted. "Cap's the crook, and a liar, too. Tried to rope me in by saying the whole crew is in on the deal. Cripes! I'll bet they're plenty sore at me!"

"Naw," grinned the overjoyed mechanic. "They're just hurt and puzzled. They'd go through the sun's corona for you, Mike. Think you could have bulldozed 'em single-handed if they wouldn't? Or if they really were crooks?"

Mike smiled broadly now. Pretty good old universe after all! He felt much better, squeezed Joe's arm.

"Go tell 'em I'm sorry," he whispered. "But I'm still boss of the outfit just the same, see?"

"Sure Mike!"

Joe was gone in a flash. The detectoscope operator grinned understandingly.

The T-3 cruiser was alongside now, and both vessels were accelerating to the limit of human endurance. G. H. Q. was calling again, and asking for personal conversation with Captain Brown. Mike winked at the heliograph operator and ordered him to report the captain ill and himself in charge. Approval came instantly from G. H. Q. Mike was sitting on top of the world, though millions of miles from it.

"Every man jack of the outfit is tickled pink," averred Joe, as he returned to the control room. "Told 'em all, and they'll all stick by you."

Joe was examining Mike's eye.

"Cap have anything to do with that?" he asked.

"He had everything to do with it," said Mike, ruefully.

"No foolin'! What'd you do to him?"

"Plenty. But I'll tell you about that later. We're getting in close, now. Here's the monster in the screen. Look!"

They were at the forward periscope. A weaving mass of silvery whiteness could be seen near the centering lines on the bright disc. The imperiled liner was there, too, a sleek, black shape that carried no topside markings. A Venerian vessel, undoubtedly.

The milky monster of space was something that struck terror to all voyagers who sighted it. A vast island of sickly whiteness that swung in a sluggish orbit between Venus and Terra. An unexplained phenomenon—alive it seemed to be—that had accounted for several of the great interplanetary liners. Sucked them in, that's what it did! Reached out with long slimy arms, not unlike an octopus, and with terrible energies that drew the victims to its clammy bosom willy-nilly. No one could keep track of its movements, either. Orbit changed

from time to time, unaccountably. The cream of the scientific talent of three planets had given up the problem of solving its mysterious nature. Of the many vessels known to have been drawn into its influence, only one had escaped. But that did not alter the present situation. The effort must be made.

An operator's voice came in over the etherphone from the imperiled liner. Panic-stricken, he was. The vessel, he reported, was doomed. They had full repulsion on; anti-gravity energy and all propulsion energy as well; but all to no avail. Steadily they were being drawn closer to the monster that now loomed so close in the screen of the cruiser's periscope.

Mike took the controls and signalled the cruiser from T-3 to stand by. He noted that the mysterious energies of the monster already were gripping his vessel. They were swinging in toward its menacing bulk with ever-increasing speed. The black ship from Venus was turning over slowly as the conflict of its own energies wrenched frame and hull plates.

The sun was eclipsed by the monster now, but its light showed through in eerie streaks that seemed to light up with the fires of the hot lava pools of Mercury. Great tentacles oozed forth from its billowing surface and writhed in apparent eagerness to engulf the prey that was now so close. In the control room of the cruiser, strange pranks were played by orange brush discharges induced by the energies emanating from the mass. Every knob and lever glowed with the awesome light and Mike found the energy control handwheel growing warm in his hands.

He was discussing the situation now with Captain Presser of the T-3 crew. They were in desperate straits themselves. As quickly as he could do so, with any regard for safety at all, Mike maneuvered the cruiser to a point near the black liner which was rolling and twisting in the grip of the energies of the milky monster. Captain Presser's ship was standing by nobly, and both vessels were using full gravity repulsion to maintain safe distance from that terrible attracting power.

Two huge metal cups were drifting from the side of the T-9 cruiser now; their cables were quickly snapped taut as they were drawn toward the writhing sea of whiteness. The motors sang as the cables slipped rapidly through their hermetically sealed hull tubes.

"Easy now, Dooley," came the voice of Captain Presser from the etherphone. "When you get them in contact with the liner, apply the juice gradually or they'll rip off the hull plates."

"Yeah, I know," said Mike. "If we can't pull her we'll try and hold her, while you go after those nearest tentacles with the disintegrating ray. All ready now!"

Two miles of cable had been paid out and the cups that now seemed so tiny at the ends of the two slender lines were wavering near the hull of the black liner. Mike was watching through the telescope as he gave word for the application of the energy. He saw the cups draw together due to their mutual attraction. Then they were clamped to the side of the twisting vessel. Once, twice, the cables wrapped around the rolling hull, then came a tug that shook the cruiser from stem to stern.

"Give her the works!" called Mike. "Pull!"

Back in the power room the bell clanged as Joe relayed the order and the engineer ran up his generators to full power. Mightily the cruiser strained.

The black liner was straightening out, now. She had stopped rolling, and great shuddering vibrations transmitted over the steel cables told them she was fighting with all-her power to help. Still the distance indicator showed they were losing ground. The speed of the black liner in her plunge toward the monster had been greatly reduced, but still the distance between them was decreasing. Slowly, ever so slowly it seemed to Mike, the two ships were drawn together. But still they were moving in toward that grim certainty of annihilation that lay in the horrid breast of the milky monster.

Dozens of slender tentacles now reached for the liner, their weaving actions ceasing as they stretched to their full length. A matter of seconds now and their tips would contact. Mike thought of the high explosive charge that lay in the magnetic tube forward. He turned the nose of the cruiser slightly and sighted along the slender direction finder of the weapon.

The liner was turning now, under the influence of the cruiser's movements. The cables still held taut, but the change in position was communicated to the black vessel. The trip of the magnetic gun was blistering his fingers, but Mike had lost all consciousness of pain. He pulled it quickly when the cross-hairs of the telescopic sight were where he wanted them, just missing the hull of the black liner. He dimly realized that there was a recoil.

His vision was obscured by the spouting whiteness of a tremendous upheaval in the white mass below the liner. For a moment he thought their cables had snapped. The needle of the distance indicator was moving forward now; they were drawing away from the monster. The liner was safe. He could see it dangling at the end of the cables, firmly held by the magnetic anchors.

"Good work, Dooley!" Presser's voice came to him through the etherphone speaker. But he gave it little heed, for suddenly the indicator swung back, showed him they had gained almost nothing. They were actually slipping back again, now.

The surface of the monster contorted violently, writhing spasmodically with the expanding and contracting motions of a swimming jelly-fish. Mike could see the crater he had blown in the nasty white thing filling in rapidly. What unnatural energies it held! He was thinking of the old law of the mutual attraction of bodies. Directly as the product of their masses—inversely as the square of the distance between them. But this thing! No natural law could be applied to its forces. It was alive—viciously, eternally alive! The heat in the control cabin was sickening him. He saw from the corner of his eye that Joe had slumped weakly to the floor and was breathing with difficulty.

"Presser!" he called into the etherphone. "Give it a taste of the ray!"

Mike was seeing hazily through a blood-red film that covered his eyes. The cabin was filled with flickering lights, set up by the radiant energies of the monster. It was incredible that such a thing could be! But here it was and they were fighting it, desperately and hopelessly. The ribs of the cruiser creaked under the abnormal strains.

He tried to communicate with the liner, but got no response. Evidently her apparatus was paralyzed—etherphone, infra-red ray, heliograph and all. Presser was driving his vessel in closer, now. He'd be caught, too, if he wasn't careful. The square of the distance!

A thin beam of dazzling light shot forth from the nose of Presser's ship; contacted with the heaving billows of white below the liner. It traced a smoking black line as it traveled forward and back over the writhing milkiness. A muddy pool appeared and the whiteness receded with twisting streamers of its material flung far from the surface. Octopus arms waving wildly and reaching out into the vacuum. They'd get 'em yet! All three of the puny, man-made vessels eventually would be drawn in. Drawn in and crushed. These squirming feelers would creep through the torn hull plates and ooze along the passages, reaching for and absorbing their helpless bodies. The disintegration ray was hopelessly inadequate.

Presser had fired another high explosive into the monster, and for a minute they made progress; drew slightly farther away from its seething surface. Then they were slipping back again, slowly, but inexorably. Someone was stumbling across the cabin floor, cursing horribly. Mike heard him fall to the floor plates. He knew his crew had been, for the most part, overcome by radiations. He was almost as certain of the fate of the crew in Presser's vessel, as he watched their maneuverings through the thick glass of the forward ports.

Then, just as everything seemed lost, a slim shape darted swiftly across his line of vision and headed for the maelstrom of whiteness. A tiny ship it was, not unlike and scarcely larger than an I. P. scout vessel. Five green lights in a line showed topside.

"Rolenski!" said Mike, aloud. "What the devil is he doing here?"

In amazement he followed the movements of the little ship as it rushed in and cut between the black liner and the boiling surface of the monster, a brilliant fan-ray of red trailing astern.

"The heat ray!" gasped Mike. "He's got a heat ray generator!"

The red ray seared the surface of the monster with devastating effect. Its tentacles subsided at the point of contact, some of them vanishing in complete dissolution. A space was cleared away beneath the liner, a large area that blackened and charred rapidly. Presser joined in with his D-ray, and the fury of the combined attack was making itself felt. Mike hurled another shell from the magnetic gun, adding to the destruction.

"Presser," he called into the etherphone, "come alongside and drop your cables. We'll be able to pull her out, together."

"It's too late." Presser's voice was very weak. "We're lost, all of us!"

"Lost, hell!" snapped Mike. "Can't you see that little ship out there rippin' the guts out o' the monster? Snap into it!"

He held his breath waiting for the reply. Lot of nerve he had speaking like that to Captain Presser, when he was only a flying sergeant. But he knew that Presser was weakening and needed to be bolstered up. His own head was clearing rapidly.

"Okay, Dooley." Presser's voice came meekly, barely more than a whisper.

The T-3 cruiser lurched into a change of direction, came alongside. Mike felt sorry for her commander. He'd been pretty close to those awful radiations down there.

"Attaboy!" he called into the etherphone. "How're you holding out?"

"Crew's mostly down," said Presser, "but I think we'll make it."

Mike saw the magnetic anchors drift from Presser's ship. Swiftly they dropped toward the hull of the black liner; took hold hesitantly, though, as if the controlling operator was uncertain in his movements. A jar that shook his own vessel told Mike the strain had been relieved by an additional pull.

"Not too fast, now, Presser," he cautioned.

But the etherphone was dead. There was no reply. Barely accomplishing his purpose, Presser had succumbed.

The extra pull was helping a lot. Mike knew his full power was on, and could do nothing except to reassure himself that the control was in its maximum position. The needle of the distance indicator hesitated and stopped its motion. The forces were exactly in balance.

Then down below the tiny ship with the green lights circled again, spraying the awfulness with its fan-ray. Mike was filled with admiration for the stranger's courage. Yet he had sworn to get him, and get him he would. Afterwards.

The indicator needle was wavering now. Would it advance or recede? Crazily he cast about for some means of increasing the pull against the monster's might. Only a little now and the trick would be done! Frantically he tugged at the reloading mechanism of the magnetic gun. Again and again he pressed its trip and watched as the high explosive tore gaping wounds in the sea of white. A swift glance at the needle again. Thank God, they were receding now! It was the end—victory. Mike's senses deserted him.

ONLY for a few moments was his mind a blank. He fought desperately to come out of it, gripping the hot controls with the tenacity of a drowning man. He forced his lids open and shook his head to clear it. God,—they *had* won! The distance from the monster was widening rapidly, six thousand miles a minute. Presser's ship was reeling drunkenly at the ends of her dangling cables. Still with the anchors glued to the black liner's hull, but entirely out of control. Have to be careful now and not snap those cables.

He tried the etherphone—all the means of communication—but there was no reply, either from the black liner or from the cruiser from Station T-3. The tiny vessel, Mike noted in the detectoscope disc, which had been of so much help, was drawing away from the monster and approaching him. As he came up, Captain Brown's voice reached him through the ether.

"Mike," he called, cautiously, "are you there?"

"Yeah, I'm here," growled Mike. "I'll be here 'til we land this liner, you damn traitor, but I'll be on your trail as soon as I've had a minute's rest. I gotta thank you for helping us out just now, but I warn you. I'll get you and your crooked partner if it's the last thing I ever do."

"Do you know what ship this is you just rescued, Mike?"

"How the hell should I know?" demanded the sergeant. "No top markin's!"

"Then listen a minute," Cap's voice was wheedling. "You're towing Rolenski's flagship. There's millions in radium aboard. He'll take—"

"He'll take nothin'," cut in Mike. "No wonder you two birds were so damn helpful. An' if you think you'll

take the ship away from me, try an' do it, that's all. You'll go to the hoosegow along with the rest of the scum."

Imagine Cap having the nerve to try something like that. Mike was raging. But Cap's wheedling voice was coming in again on the etherphone. The little vessel with the green lights was very close now.

"Keep your shirt on, Mike," he pleaded. "Rolenski says he'll cut you in for a full third of the swag if you'll release the liner. Listen to reason, man; you'll be independently wealthy. The I. P. don't know anything about it, or whose ship it is."

Joe Tripp was stirring into consciousness where he lay on the floorplates. He was awakened to the full by the roar of rage turned loose by Mike. He sat up suddenly and watched the big fellow as he ran to the operating panel of the stun-ray. The quick whine of a high-speed generator rose to shrill pitch and was gone above the limit of audibility.

Mike sighted along another tube and jerked a lever. A vicious stream of violet light shot forth from the nose of the cruiser and struck fair against the hull of the tiny vessel of the green top lights.

"There, damn you!" grated Mike. "Guess that'll fix you, you double-crossin' skunk! You and Rolenski. We've got the whole dirty gang of you, now!"

The little ship drifted helplessly and the etherphone ceased operating. All mechanisms on the small vessel had been paralyzed by the ray, as had its occupants. It was an instrument that was used by the I. P. only in extreme emergencies. Mike felt this was the time, if ever, to make use of it.

Swiftly he maneuvered the cruiser so that it made contact with the hull of the little ship at the point where a magnetically-operated grappling mechanism was attached. He pressed a button and the small ship was prisoner to the large one, riding its hull like a parasite fish to its host.

Joe smiled weakly in approval.

"Been going places and doing things while I've been out, eh, big boy?" he said. "What's it all about?"

"Just you wait, buddy," grinned Mike. "The fireworks are coming. Get busy now and see if you can bring the rest of the crew around."

NOW that they were millions of miles away from the awful radiations of the monster, Mike noted signs of returning consciousness on Presser's cruiser. She was under control again.

The black liner had been reeled in close, and was being towed by the cruiser from T-9. The etherphone was busy between the two I. P. vessels, but still no response was obtainable from the rescued liner. Evidently she was completely crippled; possibly her entire crew had been killed. At any rate, the supply of radium was aboard, and Rolenski was where he could not get hold of it.

Mike was jubilant, but he begged Presser not to report to G. H. Q. until they reached the station and had all prisoners under lock and key. Presser would have agreed to anything just then, for he gave full credit to Mike for the success of the entire expedition.

It was a quick trip to Station T-9, but much labor awaited them when they arrived. Many of the members of the crews of both ships were still very sick men from their experience. There was the problem of landing the

crippled liner in the great receiving lock of the station and of putting her entire crew of cutthroats under arrest should they be found alive.

Eventually the landing was made successfully, and the outer hatches of the huge receiving lock were closed. Air was admitted to the inner chamber and the crews of the I. P. vessels emerged through their manholes.

The main receiving lock was a great domed chamber where half a dozen of the cruisers or three of the largest liners might be accommodated. Its interior was brilliantly lighted and the air seemed fresh and sweet to the exhausted men who disembarked.

Mike wasted no time in dragging Captain Brown and Rolenski from their little ship. Both had recovered somewhat from the effects of the sun-rays, but were still groggy when they were handcuffed together. They offered no resistance, standing meekly by while the crews of the I. P. ships broke into the main manhole of the black vessel.

One by one the surly outlaws were brought into the light by Presser's and Mike's men, and disarmed. A tough lot they were. None of them had suffered seriously from the grueling experience with the milky monster, but they knew when they were caught, and seemed ready to face the music.

"Now," said Mike, "when the entire hundred and ninety were herded together, 'we'll communicate with G. H. Q. Fine lot we've got here, Presser, with the big chief, himself, thrown in for good measure.'"

"You mean Rolenski?" asked Presser. "Where is he, Dooley?"

"Here!" Mike jerked roughly at the stocky man who was handcuffed to Captain Brown.

Presser advanced toward him, pulled his cap from over his eyes.

"You, Rolenski?" he exclaimed. He moved his head from side to side, peered into the smuggler chief's face from all angles. "Why, seems to me I've seen you before."

"Guess you have, Captain Presser," smiled the heavy-set man from between lips that were still swollen from his encounter with Mike in the desert. "But before we discuss things, it might be a good idea to take these bracelets off me and put them on that tall fellow over there—the sixth one from this end."

Mike's brain was in a whirl. He didn't get it at all.

But the tall fellow indicated by the stranger, realizing that he had been exposed in his true colors, galvanized into action, dropped swiftly to the floor and was crawling from amongst his fellow prisoners. Pandemonium broke loose in the receiving lock.

The real Rolenski was out from the ring of guards now, and they dared not fire on him for fear of endangering members of their own force who were all around. In an instant he was at the open door of one of the scout air-locks.

One chance in a million and he had taken it! No wonder they called him the iron-nerved smuggler! It was inconceivable that he should get away with it, but there he was, scrambling through the circular opening. A dozen automatics spoke in unison. But Rolenski was inside and the cover was swinging home. Once he clamped it, he'd be able to get away in the scout ship that was waiting inside.

Mike was across the intervening space in a bound. Struggling with the king of crooks for control of that

swinging door! Powerful hands gripped him and hauled him through. His head struck a hard object and he fell to the floor. Hazily it came to him that the door was clanging to its seat. Rolenski was bolting it from the inside. Then Mike dragged himself to his knees, grabbed the man's legs with desperate clutch, endeavoring to trip him up. He was in for the battle of his life.

The suddenness of the happening left consternation among the officers of the I. P. who had been shut out by the slamming of the air-lock door. There was nothing they could do—in time. The thick steel wall and the thicker door would resist anything save acetylene torches or fusing beams. That would take too long.

Not a sound could be heard from within the air-lock. There were chuckles of enjoyment from the prisoners, but the guards were keeping them in check. It was bad enough that their leader had gotten away.

In Mike's weakened condition he'd be no match for the lanky giant he had followed. A blow from a wrench, a stiff uppercut probably, and he'd be out. Rolenski had a clear path for his getaway—and in a vessel of the I. P.!

"Sergeant Ferris!" boomed Captain Brown, who was first to recover from the general astonishment, "Into your ship—quick! After him!"

Ferris dashed for his own air-lock, but halted in surprise as he saw that the door which had so recently closed, was opening. It swung wide and a limp figure was pushed through to fall heavily to the floor of the receiving lock. It was Rolenski. What a man Mike Dooley was!

Still able to walk, the sergeant dragged himself through the air-lock after the vanquished smuggler chief and staggered across the floor. With a stiffening of his body and a jerky motion of his right arm, he saluted Captain Brown. Mike was battered almost beyond recognition.

"Got him, Cap!" he muttered.

Captain Presser, of T-3 caught him as he fell.

HOURS later, Mike awakened in a snowy cot of the dispensary of Station T-9. He turned his head, wonderingly, stared straight into the smiling eyes of Cap Brown, who lay on the next cot. Astride a stool, between them, sat Captain Presser.

"Captain Brown," said Mike, penitently, "I'm sorry about the bullet in your leg. But what could I do? You hand me a line of hokum, and maul hell outa me besides. How come? For cripes sake, tell me."

Brown laughed, winked broadly at the stocky stranger who had stamped into the room while Mike was talking.

"Suppose," suggested the newcomer, "you let me tell you."

"Say," interrupted Presser, "I know you now. You're Colonel Roland. I haven't seen you for ten years. What are you doing here?"

"Several things," smiled the Colonel. "But this haul is just as big a surprise to me as it is to the rest of you. I didn't come here to nab Rolenski, but to get certain information. I'll have to hand it to you, Mike!" He held out his hand. "You're the——"

"Then you're not sore," said Mike, grasping the outstretched hand, "over that beating I gave you?"

"You're darn right I'm sore," grinned the Colonel, "in every spot you hit me. But I'm not angry, if that's what you mean."

"Well I'll be damned!" said Mike, fervently.

Captain Brown chuckled, but it turned to a groan as he moved his position. That leg was getting mighty stiff and sore.

"How'd you know," demanded Mike, suddenly, "that was the smuggler's ship out there?"

"Picked up a message in their code," explained Roland, "after you left us flat. G. H. Q. didn't know it, for we had the only decoder on my ship that was set for their particular code."

Mike raised himself, to lean on the elbow, seemed to become aware, for the first time that his hands were tightly wrapped in smelly bandages.

"What happened to the gang?" he asked.

"All locked up—for keeps. Rolenski is in the prison hospital with four broken ribs and a fractured skull, not to mention a smashed nose and an ear that will forever resemble a pancake. What'd you hit him with?"

"Everything I had," laughed Mike. "But for cripes sake, go on and tell me about this deal you and Cap pulled——"

"Oh, that," interrupted the Colonel, "was for the good of the service. We had to do it—orders from G. H. Q."

"You mean," snapped Mike, "you did it deliberately—to see if I could be bought off?"

"Of course," said Roland. "Headquarters sent me out here for that very purpose, to give you the supreme test for loyalty and integrity, and find out whether you're fit to be in the service. The stage was carefully set, then you were brought on and not only allowed to see Captain Brown taking money, but invited to share in it. Had you done so, we would have known you were unfit——"

"Seems to me," burst out Mike, suddenly chagrined that he had not suspected the trap, "that you could find better use for your time than gallivantin' around over the universe tryin' to make suckers out of flyers."

"When there are promotions to be made," smiled Roland, "somebody in the I. P. has to do it. And there was a job open, a big one, something that required the best man in the service. There's a new department being organized—Bureau of Supervisory Control—jurisdiction over all liners in transit. You're Major Dooley, now, Mike, in charge of the new department."

"Who, me?" blustered Mike.

"You," said Roland. "Headquarters confirmed the appointment as soon as they received the report made by Captain Brown and myself. Congratulations!"

"Well, I'll be damned!" said Mike. "Cripes, but ain't this a great life, bein' a sky cop?"

THE END

The Inevitable Conflict

By Paul H. Lovering

(Continued from page 797)

He flung a glance toward the approaching soldiers, headed by Shackleford.

"Those men carry the banner of the old republic! This is revolution!"

"So the Council decreed," Mowbray replied, curtly. "They have made the conflict between the old order and the new inevitable."

Silence descended like a pall on the lords of uncounted wealth as the soldiers shouldered through the doorway. Hare alone spoke, his hands convulsively gripping a desk and perspiration standing in beads on his working forehead.

"Thieves!" he screamed.

"We are to be driven from our own Council Chamber by thieves!"

"Thieves they are," Mowbray replied grimly. "They

come to steal back the government taken from their forefathers."

With an insane laugh, Hare turned to his silent, frightened colleagues.

"Bow your knees," he shouted, "to Stephen, King of Thieves."

A growl of anger rose from the soldiers. The Commander stilled it with a word.

"Harm no one!" he ordered. "Clear the hall!"

He mounted the dais recently vacated by the Matriarch and faced the throng of helpless autocrats and armed lower-caste troops.

"I take over the government from inefficient hands," he proclaimed, "that threatened to imperil the safety of the nation and the race. As your Commander, I shall govern here until the people elect their own rulers."

END OF PART I

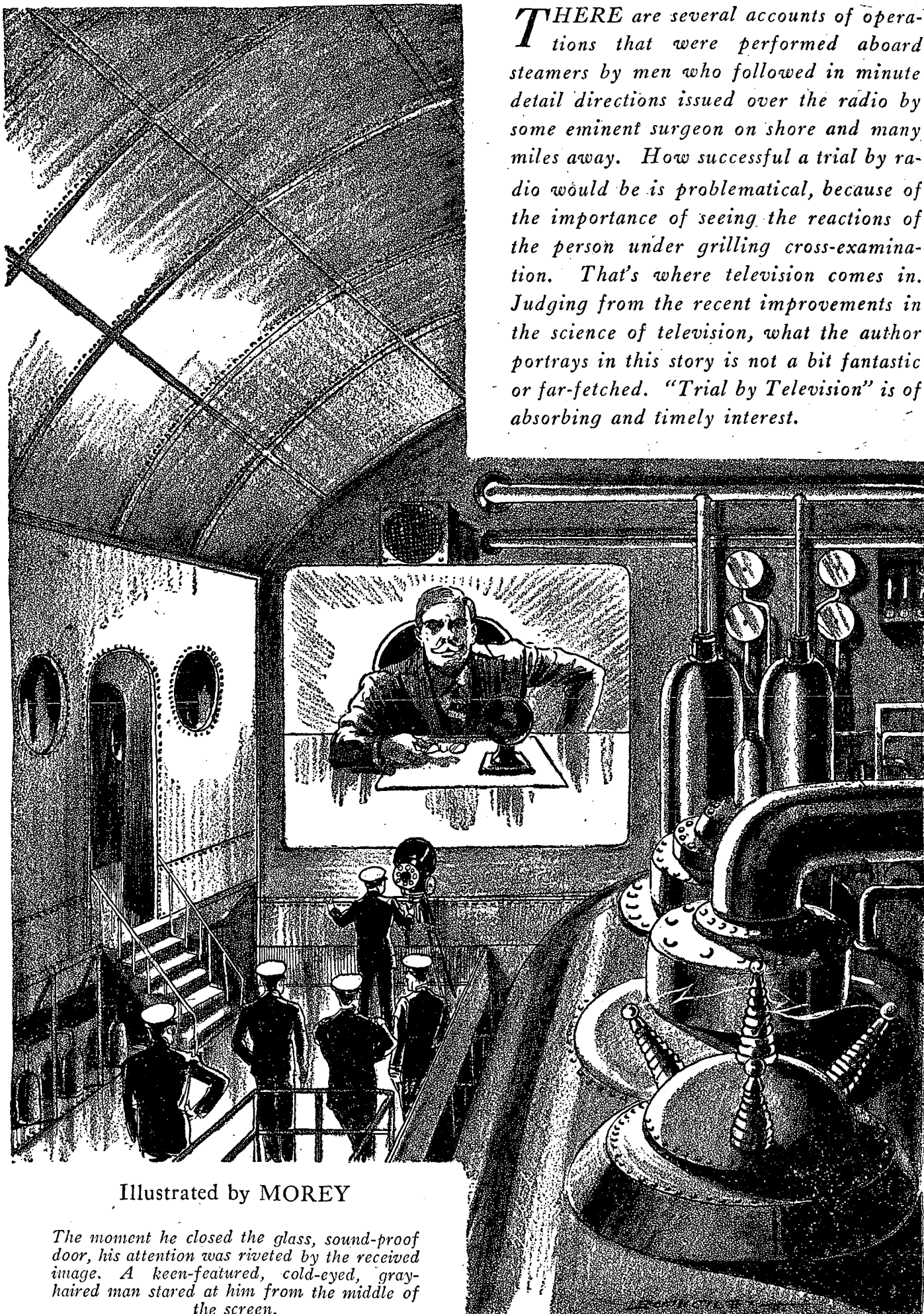
"Seeds of Life" by JOHN TAINE

A masterful book-length sciencefiction classic
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*T*HERE are several accounts of operations that were performed aboard steamers by men who followed in minute detail directions issued over the radio by some eminent surgeon on shore and many miles away. How successful a trial by radio would be is problematical, because of the importance of seeing the reactions of the person under grilling cross-examination. That's where television comes in. Judging from the recent improvements in the science of television, what the author portrays in this story is not a bit fantastic or far-fetched. "Trial by Television" is of absorbing and timely interest.



Illustrated by MOREY

The moment he closed the glass, sound-proof door, his attention was riveted by the received image. A keen-featured, cold-eyed, gray-haired man stared at him from the middle of the screen.

Trial by Television

By Fred Kennedy

MOLBY GRANT stood on the upper deck of the Brantler air liner, engaged on the 40° Parallel run. It was the year 1985. Overhead, the huge steel hangar formed an arch, spotted with the powerful Mackenzie ray lights which illuminated the giant dome with a brilliant white glare; no shadows here.

Grant was second engineer of the ultra-modern Brantler. He was watching abstractedly the scene full 200 feet below him. Ant-like figures of passengers filing slowly towards the escalator tube that conveyed them to the huge ship. Mechanics and greasers running hither and thither intent upon various errands. Egmine fabric testers with their voloscopes testing the metal case of the cigar-like air giant on which they stood. Further forward fifty men were overhauling the pressure equalizers.

Grant made a colorful picture on the bridge—his tall figure in the Meridian Company's blue uniform being thrown into relief by the expanse of silver hull that served as a brilliant background. The lines of gold braid on his sleeve indicated his rank, that of second engineer.

The lift came up and another figure emerged from the hermetical doors of the streamline lift-head situated on the port side of the bridge. An older man came out, much shorter than Grant, and as fat as Grant was thin. Grant towered head and shoulders above McCurdie, who seemed to be in high good humor. He had undoubtedly been fortifying himself with a few stimulants.

"Well, Grant lad, only another wee hour before we start on this hell busting trip again."

"Yes, sir, and I hope we make as good speed as we did in our last voyage."

The chief winked his eye. "Aye, we're after making as good a speed and better. The gas company's just slipped us a new and improved type of alacrine that vaporizes at 500 lbs. less pressure; if we don't chip another two hours off this trip, lad, I'll be after resigning me job to ye."

Grant smiled; he intended to get the chief's job anyhow, and in this coming trip, but he only said, "Then I hope your new patent lets you down, sir."

McCurdie smiled, and said, "Don't you worry, laddie, wid de brains of yourself. It won't be after long when you get the chief's ticket."

One of the fabric testers came up to the chief, saluted and made his verbal report.

Grant leaned over the rail, his chin on his hands, thinking bitterly how often had the chief spoken like that. "He'd get the chief's ticket by and by; not long now." The same talk ever since he had worked his way up from the bottom of the long line of engineers to the position

of second. For two years he had held this position, and yet there were no signs of obtaining the coveted rank of first. Time had dealt kindly with McCurdie. He was past middle life with a goodly sprinkling of silver in his once-raven hair. He was in excellent physical condition, though. To wait for McCurdie to retire meant another five or six years of delay. True, the company was reluctant about placing the engines of their huge ship in command of comparatively young men, but he had been promised McCurdie's position when the Scotchman retired.

Grant's chest swelled at the thought of being in command of the engineer's department at the age of 30. Fate seemed unwilling to hurry things. Well, he must take matters into his own hands. It could be done.

The hatred that existed between Lopez, the shifty Spanish chief electrician, and McCurdie, the dour chief engineer, was common property of the ship's crew. Time and time again had McCurdie tried to secure Lopez's dismissal on different pretexts. Each time he had failed. The company considered Lopez too valuable to be discarded. The hate that Lopez had for McCurdie increased day by day, until Grant hoped that Lopez would, in one of his fits of rage, murder the chief. The Spaniard seemed afraid to make a move. Well, Grant would make one for him. Were McCurdie to be killed, suspicion would naturally attach itself to Lopez.

A hand slapped Grant on the shoulder and he heard McCurdie's booming voice, "Well, lad, after day-dreaming again."

Grant straightened himself and smiled. "No, sir, only thinking of the might-have-beens."

"Bad notion that, me laddie. Look into the future, and not into yer past."

"But," said Grant, "it's our past that gives us experience."

McCurdie raised his eyebrows quizzically. "Don't you believe it, lad; experience is a thing we're after getting when we have no more use for it."

Grant smiled. "Well, sir, I wish that was the company's idea."

"Aw quit worrying, lad, everything comes to him who waits."

"Yes," replied Grant, "if they wait long enough."

The strident note of the huge buzzer cut short any further conversation, summoning the two in command of the engine room to their duties below. They opened the small hermetical streamline tower, and stepped into the lift. At the sixth tier McCurdie got out to visit the officers' mess for further fortification.

Grant descended to the engine room to attend to the testing of the compressors and ionizers, and to supervise

all the various machines which would shortly prove their worth on their daily trip around the globe.

It was 6 p.m. now. At 6.30 p.m. the ship would leave New York hangar, returning the following day. Eastern U. S. standard time was maintained throughout the voyage.

GRANT thought that when the ship returned from her world trip, and entered the hangar again, he would be in the chief engineer's position.

"All credit, and no work," Grant smiled. The phrase seemed to sum up the position of chief very well.

The lift slowed down, and stopped on the engine room tier, the lowest story of the ship, a full 150 feet below the bridge deck. Grant got out.

Fifty men were here, all attending to the machinery, scattered in various banks over the vast engine room, the latter brilliantly lighted as was the hangar outside by the Mackenzie rays, vivid behind their triangular prisms.

Grant examined the conduits leading to the three million horsepower Weston-Smith motors ranged amidships. Then he looked over the motors themselves, paying special attention to the lubricators.

Upon his command, the starters were thrown over and the huge machines commenced to revolve slowly at first, then gaining speed, till they attained their normal 6,000 revolutions. The engine room was full of their hum, as the notes came in and out of phase. Grant thought if it were not for the sound absorbers, which diminished to a great degree the noise of the motors, it would be impossible to remain in the machine room. He glanced at the various meters. The feed was the normal 100 kiloamperes, the voltage $22\frac{1}{2}$ kilovolts. Nothing wrong there. The huge æron compressors were next thrown in gear; and the æron gas was compressed into the dummy tanks to stimulate the normal working conditions.

Grant watched the needle of the pressure gauge creep up to 6,000 lbs. per square inch, at which pressure the æron gas began to escape through the safety valve on the exterior of the ship, blowing the engine siren.

He threw the compressors out of gear; all was as it should be—5,000 lbs. per square inch was the normal working pressure of the compressors. The mixing tanks proved to be tight. He hardly expected there to be a leak in the 20-inch double wall of the Stephens pressure equalizers. These enclosed the chamber out of which the æron gas issued at a pressure of 5,000 lbs. per square inch to unite with the alacrine gas, causing instantaneously a tremendous explosion, the recoil of which drove the ship at her normal speed of 1,000-miles per hour. The huge 14-foot exhaust pipe connecting the expansion chamber to the outside of the ship also proved satisfactory under the requisite Board of Trade pressure test.

Grant paused in his inspection to examine the deadly cylinders of alacrine gas. He opened the first hermetical door and stood in the small filter chamber. Taking a gas mask from a shelf, he commenced to put it on. The Board of Trade took no risks with alacrine gas. One part in a million of air was fatal to human life. Right ahead, immediately in front of the door he had just passed through, stood the entrance to the storage room. The space between the two doors had a constant current of air flowing through it. The air in that chamber being sucked out passed through filters to rid it of any trace of alacrine, and then was pumped back again.

Grant entered the storage room, and examined the pressure gauge on the gas cylinders. It occurred to him that the gas offered a very convenient way of killing McCurdie.

Grant stood in deep thought for a few minutes. Eventually a smile crossed his face. He had apparently thought of a solution.

Grant closed the hermetical door, and stood in the ante-chamber, waiting for the outer door to open. It was impossible to reach the engine room till three minutes had elapsed from the time the storage chamber entrance door was opened, this interval being for the purpose of allowing the air to be freed of any traces of the deadly alacrine. The electric time-lock opened the door, and Grant, taking off his mask, went into the engine room.

Grant was met by the third engineer, Slayton. To him Grant spoke a few words regarding the power receptors. These were situated in the after part of the ship, and received the two hetrodyned rays from the central New York power station. These rays served as conductors for the current supply, which was necessary for driving the ship's engines. Thus the ship was always in touch with the power house. Years of research had proved the Cummings hetrodyne ray dependable even up to the distance of the earth's circumference. This ray, together with the Stephens' expansion jacket, had revolutionized flying, enabling aircraft to attain altitudes of 1,000 miles. At this altitude there was little or no atmosphere, enabling ships to travel at tremendous speed, with a complete freedom from storms and air pockets, and with a minimum expenditure of power.

Grant examined the huge zedrometal shaft that drove the helicopter propeller, and lifted the machine vertically to an altitude of 1,000 feet, when the recoil principle was used for driving the craft.

All seemed in order. Grant was about to enter the lift to return to his place on the after bridge when he was accosted by Lopez, chief electrician.

"Señor, I wish to make it known to you that the trip being finished, I shall resign my position on this vessel."

Grant was surprised. "What's this, Lopez, you resigning? What's in the wind now, found a better job?"

"No, Señor. Only a position in the Lunarfreight service ship at the same rates."

"Same rates, eh? Then why leave your comfortable berth here for a smaller ship?"

"Ah, Señor," the Spaniard's eyes glittered, "with a perro like McCurdie life is a hell."

Grant decided to close the conversation. Anyhow, it was none of his business.

"Well, Lopez, I guess you know best. I shall be sorry to lose you."

"Señor, it is a pity there are few Americans like you."

Grant entered the bridge lift and in a few seconds found himself on the upper deck. Well, that clinched the matter. It would be on this trip. No two ways about that. McCurdie would have to die.

Grant glanced at the drome clock. The huge hands read 6.20 p.m. In ten minutes the ship would be ready to start. He noticed that the escalator tube had already been lifted clear of the vessel. The workers were leaving the stonite platform on which the ship rested.

With a rumbling sound the two halves of the great hangar roof slid open, leaving the regulation space through which, in a minute, the craft was to rise.

Grant gazed at the starlit sky overhead. The night was calm. That meant no lost time in gaining the necessary elevation.

The clock read 6.25 p.m. Only five minutes to go. Deep down in the engine room he heard the muffled sound of a clanging bell. Simultaneously the giant helicopter propeller above his head started to whirl, slowly at first, and gathering speed, until the ship quivered from stem to stern.

On the bows, 600 feet away, Grant could distinguish over the expanse of glistening metal the navigating officer in his triple expanded glass observation cabin.

Grant entered the lift tower, turning on the switch that hermetically locked the entrance door. He reached the engine room just as the ship left the hangar floor, rising higher and higher, gathering speed as it ascended in a vertical line as straight as an axiometer. The ship passed through the oblong opening of the hangar rapidly, attaining her maximum vertical speed. At an altitude of 1,000 feet, the engine room telegraph rang. The main bank of motors commenced to revolve, driving the aeron compressors. The engine room floor trembled with the force of the muffled explosions as the ship started to climb upwards into the heavens at a tangent.

At a second command from the bridge the helicopter propeller was withdrawn by compressed air mechanism into the streamline hull.

Grant stood at the control board, keeping his gaze on the needles flickering over the various dials. The vessel's speed was already 500 miles per hour, the engines turning over at 2,000 revolutions. Well, McCurdie was right, for once. This new gas certainly was an improvement. Grant gazed at the television screen, showing the earth already far beneath. It looked to him like a grey blur. In a minute clouds would obscure it. He watched the slight movements of the elevator and rudder-shafts as the electro-originator kept the ship on her prescribed course.

McCurdie emerged from the port door of the engine room, a cheerful expression on his flushed and benign countenance. It was not difficult to ascertain the cause of his high good humor. Probably connected with the contents of a bottle, thought Grant.

McCurdie approached him.

"Well, laddie, dinna I tell ye that the gas would speed her internals up?"

"You're right, sir. I never saw such an improvement in my life. It's put another 200 miles per hour over her normal."

The Scotchman's gaze roved fondly over the various whirling mechanisms. A new note was added to the din—the steady thump of the Stephens' pressure equalizer pumps. Grant thought he might as well tell McCurdie of the resignation of Lopez.

"By the way, sir, Lopez has just informed me he's resigning after this trip.

The Scotchman was exuberant.

"Dinna I tell ye, lad? It's the weel of God. The skaramouching greaser. The ship will be weel rid of him!"

"But, sir, he's a valuable help with those raylites."

"Laddie, dinna yer try to convince me that them skulking dagos will ever be more than a curse to humanity."

With his nose in the air, McCurdie stalked out in high dudgeon from the engine room.

SLAYTON, the third, walked over to Grant, "Well, old man, what's biting the chief now?"

Grant told him of Lopez's resignation, and how McCurdie had taken it.

Slayton replied, "Well, couldn't expect anything else from the chief. You know how they love each other."

Grant smiled as the third returned to the compressors.

Grant thought deeply as he watched the needles fluctuating before his gaze. He must act in another few hours. He glanced at the engine room clock. 8 p.m. That meant they were already approximately 1,500 miles on their eastward flight. In another three hours the air liner would slow down over Spain, to unload the passengers into the small helicopter tenders. By midnight they would be well on their way for the second and shortest lap of their run. This would bring them over Constantinople a little after 12.30 a.m. the next morning.

It was customary for McCurdie to take an unofficial watch in the engine room for about an hour between 1.30 a.m. and 2.30 a.m. Well, thought Grant, that would be the ideal time for his plan. Grant and the third usually went off duty during McCurdie's watch. Or rather, McCurdie told them to leave duty if they so desired. The offer, needless to say, was never refused by the two engineers.

Grant hoped that tonight would be no exception to McCurdie's kindness.

All was running smoothly. When Grant next glanced at the clock, it was 10.50 p.m. The usual signal came through from the navigating bridge shortly after. The port and starboard Weston-Smith motors were stopped till only the centre motor was running at half speed. A slight tilt of the engine room tier became manifest, as the ship slowly dived into the earth's atmospheric belt.

At 10,000 feet the helicopters were started. There was now sufficient atmosphere for the propellers to hold the ship stationary.

The air liner stood hovering in space, waiting for the helicopter tender to arrive from Spain. Slayton, the third, wandered over to Grant.

"Say, old man, hope the dago plane won't be late tonight; cheeky sort of bounders these dagos. Remember what a stink Draglier kicked up that time we were ten minutes late? Beats me why the Meridian Company stood for it. I should have told the blighter to go boil himself in some of his own olive oil."

Grant was gazing into the televisior screen, fitted under the ship. He called Slayton's attention to the green and red ray lights of a fast approaching vessel, perhaps 5,000 feet below the liner—it was the tender.

The little plane drew up on the port side of the ship, her helicopter idling as the Feranz electro magnets held the small craft against the liner.

"Not many passengers today," remarked Grant, as the liner transferred the mail, and perhaps a hundred travelers to the helicopter.

"No," replied Slayton, "probably a thousand or so for Constantinople."

The usual signal came through from the bridge, and once again the helicopters were thrown in gear. The tender vanished far below the ship, as the liner got under way.

The second lap of the journey had begun.

Grant decided to ring up McCurdie. He wanted to find out for certain if McCurdie was going to relieve him at the usual hour.

McCurdie's answer came in the affirmative. Tonight would be no exception to McCurdie's good-natured relief.

Promptly at 12.30 a.m. the giant ship's course was arrested, and she lay at an altitude of 10,000 feet, waiting for the Constantinople tender.

Fully a thousand people—disembarked at this point. Only about a hundred air voyagers boarded the liner. The express mail was safely shipped and a quarter of an hour later the Weston-Smith motors were already turning over at their normal speed. The ship started on the third lap of her journey. By 6.30 a.m. the next morning, they should be over Peking. Another five or six thousand miles run, thought Grant.

At 1 p.m. Grant decided it was about time he started to prepare the stage for the drama in which McCurdie's death was to be the chief feature.

Grant called Slayton over to the main panel, and left him in charge. The fourth could attend to Slayton's compressors for a few minutes. Grant explained to Slayton that he thought the pressure on the alacrine gas was a trifle low. He was going into the gas storage chamber to investigate. Grant's heart was beating like one of his engines when he eventually stood inside the storage chamber, surrounded by the long black gas cylinders. He looked a strange sight, his head and face totally enclosed by the Jennings filter mask.

Grant bent over the cylinder of gas that was driving the ship, and opened the safety valve ever so slightly, just enough to reduce the pressure by a pound or so in half an hour. In other words, just enough of a leak to be noticeable.

Grant meditated. Already, in those few seconds, there was sufficient gas in the air to be fatal when breathed. Grant next turned his attention to the raylights. He opened the electronic emission gap inside the prism just enough to extinguish the lamp. It would look as though Lopez, the chief electrician, had been careless in his attention to the lights. Just as well, thought Grant, that he had kept friendly with Lopez and learned how to manage these raylights. Grant closed the storage room door, and put the filter chamber light out of commission in the same manner. Then he waited in the darkness for the second door to open. After the usual three-minute pause, the door swung back. Grant took off his mask, and went into the brilliantly lighted engine room. He blinked as the light from the ray-lamps dazzled him after the darkness of the filter chamber.

Slayton walked over to greet him.

"Well, old chap, find any electrads in there?"

Grant smiled. "No, all correct; guess it must have been my imagination. No signs of any leak. Usual pressure in all cylinders."

"Say, old man, you look pale. Guess you'd better have an eye opener with me when McCurdie comes on."

Grant accepted, remarking that the "collection of atoms," who attended to the air suppliers, was probably getting stingy with the oxygen.

At 1.35 p.m. McCurdie came into the engine room. He was cold sober once again. His eye roved over the whirling mechanism.

"All correct, Grant?"

"Yes, sir."

"Then you and Slayton had better clear. I'll take over for the next hour."

"Thank you, sir."

Grant took one more look at the portly Scotchman, and thought this would be the last time he would see him alive, if all went well with his plans. Then, he would be in sole command of this vast engine room.

GRANT left Slayton at the mess door. He promised to join him in a few minutes, saying, "he must scrub up a bit first. Always feel so grubby after being in that motor-house," apologized Grant.

Grant strode swiftly along the white corridor to his room. McCurdie's was immediately opposite. He halted a minute, and glanced up and down the narrow alleyway. No one in sight. All quiet, save for the vibration of the ship's engines.

Swiftly he entered McCurdie's room, and opened the small closet in which he always knew the Scotchman kept his gas mask. Lucky, thought Grant, that McCurdie was so particular in wearing his own private mask.

Grant located the mask; hurriedly he emptied the precious lucrine from the gas mask filter chamber. The lucrine had the property of absorbing the deadly alacrine gas. He emptied the whitish lucrine powder into the small glass vial he had brought from the engine room. He would dispose of the lucrine in his own room.

Grant replaced the mask in its original position. Against the deadly alacrine McCurdie's mask would be absolutely useless. Anyhow, it would be a quick death. Grant closed the closet. His gaze searched the corridor. So far so good. His actions had been unobserved. He wondered how long it would be before McCurdie noticed the alacrine gas leakage in the engine room.

Grant shut McCurdie's door, and went across the passage into his own room. Once inside, he poured a little Zilatric acid into the vial containing the lucrine. The contents frothed and grew warm. A minute later, only a whitish foam remained in the tube. This Grant threw into his wash sink. The whitish foam disappeared in the water. Grant washed out the vial. He next washed his hands. The lucrine was deadly poison.

Having effected an improvement in his appearance, Grant went to the mess. Saddler, the second navigating officer, and wit of the party, greeted him:

"Well, Mr. Protons, where did you spring from? Thought you'd have enough poison to drink in your own gas shop without troubling us."

A general laugh greeted his sally. Grant made a suitable rejoinder, and sat down. He did not feel like joking. At any minute he expected to receive a hurried call from the engine room telling him of McCurdie's death. He paid but little heed to the banal conversation going on around him; even Slayton, sensing that he was in a silent mood, left Grant alone at the little stonite-topped table, a drink in front of him, and a cigarette between his lips.

Grant stared at the clock. God, how slowly the minutes seemed to pass! Only 1.50 p.m. No doubt McCurdie was having trouble in getting Lopez to fix the raylites that Grant had thrown out of adjustment.

Grant tried to calm himself. He was getting just the way he did not want to be—nervous. He must stop that. He drained his glass, and called for another. He attempted to join in the conversation. His results did not meet with very great success. The speaker phone-buzzer on the wall hummed. Grant's heart missed a beat. Was it to be now? No, it was only a call for one of the officers.

Grant was wondering if his carefully laid plans had been upset. He was getting feverish in his excitement. He wondered if anybody else noticed his nervous condition.

Hurried steps sounded outside. The door was thrown open, and Barraud, the fourth engineer, framed the opening, his collar open, and face flushed. He called for Grant. The other officers clustered around the two men. In a few words Barraud explained what had happened. McCurdie had noticed the alacrine gas pressure dropping, had sent for his mask, and gone to the storage chamber. Upon opening the first door he had found the raylite out. Lopez had been summoned, and had effected the necessary repair. Lopez had gone with McCurdie into the actual storage chamber, as there was a possibility that the other ray lamp, being on the same circuit, had also developed a fault. Five minutes later Lopez had dashed into the engine room, his swarthy face pale, gesticulating, saying that McCurdie had collapsed. He had dragged him into the filtered air chamber, and had been compelled to wait the necessary three minutes before the time lock allowed him to summon help.

They had examined McCurdie, and found him dead. Barraud went on to state that he had examined McCurdie's masks, and found the lucrine filtering chamber empty!

Not waiting to hear any more details, Grant hurried to the engine room, closely followed by Slayton and Barraud.

McCurdie lay on the engine room tier beside the starboard motor, his glassy eyes staring at the raylamp overhead. His face had already assumed the greenish hue common to all alacrine gas victims.

Grant saw that the chief was already far beyond human assistance. He ordered McCurdie's body to be carried to his room. Grant notified the captain of the ship, explaining in a few, concise sentences what had happened. Lopez stood in a corner jabbering in Spanish, and gesticulating wildly to an audience of Spanish greasers. In a time like this, rank was forgotten.

Grant temporarily assumed command. Now that the thing was actually accomplished, he felt better. He placed Slayton, who became second in command, on the main panel, and went to McCurdie's cabin. There he found a small group of men gathered—the captain of the air liner, the doctor, and second officer.

The doctor stood back and shrugged his shoulders. "No hope, sir. Instantaneous death, due to alacrine poisoning."

The captain was chewing his mustache. "Most regrettable incident, Grant. Most regrettable. This will necessitate a long inquiry. Have you any idea how it happened?"

Grant explained, laying special emphasis upon the fact that Lopez was alone with McCurdie behind the time locked door when the chief engineer met his death.

He continued, "Sir, though none of my business; I feel it my duty to tell you that Lopez could not on any account tolerate McCurdie. In fact, only today I heard Lopez abusing him, and stating that he would leave the vessel at the end of this trip. This, taken together with the fact that McCurdie's mask was deliberately tampered with, I think, makes a clear case."

The captain seemed to swallow the tale whole. He replied, "Under those suspicious circumstances, Grant, I think it advisable to detain Lopez. Tell Brangman to

assume temporary duties of chief electrician. You, Grant, will take the position of chief engineer, till the end of this trip.

GRANT'S heart leapt. Everything had surpassed his most sanguine expectations. He saluted, and left the cabin, returning to the engine room.

There was little talk there. The chief's death was so sudden, and McCurdie had been a popular figure, admired by both engineers and navigators alike. Lopez was locked up in the detention room, pending further investigation.

The sudden death of the chief did not affect the management of the engines. Such occurrences had to be provided for.

Grant wondered if the captain would hold a court of inquiry, *en route*. Hardly likely; they would probably wait for the ship to land at the New York hangar.

An hour passed. The port engine room door opened, and three men entered, escorting Lopez; the *impromptu* court of inquiry, thought Grant.

He saw them file into the glass television office at the far end of the engine room.

They were not long in establishing communication with New York. Apparently the captain thought it an urgent case, requiring instant investigation, and was unwilling to delay till they reached the home port.

Grant could see the television screen already blurring, and a minute later the image of an elderly man sitting at a desk became visible. Grant from his post on the main panel could not clearly distinguish the figure on the screen behind the glass television office doors, but he thought it looked like the chief of the New York Intelligence Police Department.

Lopez, he could see, was standing in front of the television transmitter box, and was being questioned by the figure on the screen.

The questioning took quite a time. The Spaniard appeared to be talking volubly, and was gesticulating in the usual Spanish fashion.

Grant thought it was lucky Lopez had a television transmitter in front of him. His gestures and facial expressions were not being wasted. The far-away detective was having them all reproduced on a similar screen.

Shortly Grant saw why the enquiry committee had selected the engine room television office, rather than the forward one.

Barraud, the fourth engineer, who had seen Lopez come out of the alacrine gas chamber, was next called in to give his story.

So they intended to put any of the engineers who might have been connected with McCurdie's death through a questioning? That was why they had chosen the engine room television office—in order to have all the necessary witnesses right on the spot as and when required.

Grant decided it would be quite an easy matter to answer the detectives' questions with a scapegoat like Lopez handy.

All the same, Grant had not expected the captain to summon the New York police. He thought that if McCurdie and the captain had not been old acquaintances, this extra complication would not have arisen. Anyhow, it did not make any difference.

Barraud came out of the office for a minute to get the

gas mask McCurdie had worn. Grant was oblivious of the instruments below his hands. He was gazing intently at the scene in the distant office. He saw that Barraud was holding the mask in front of the television transmitter box. On the received image, he saw the detective studying the mask. Barraud turned the mask that the ill-fated McCurdie had worn, this way and that, as the detective directed through the voice reproducers overhead.

Slayton was next called into the television office. He was not detained long. Apparently he only answered two or three questions, and came out again.

As Grant expected, he was the next one to be summoned. Placing the main panel in charge of Slayton, Grant entered the television booth. Now for a grilling, he thought to himself. He was not mistaken. The moment he closed the glass, soundproof door, his attention was riveted by the received image. A keen-featured, cold-eyed, gray-haired man stared at him from the middle of the screen.

The image spoke. "Mr. Grant, I believe, second engineer, at present taking late McCurdie's place?"

"Correct, sir."

"Now tell me all you know about this unfortunate occurrence."

Grant did as he was bid. The image listened, never taking his eyes off Grant. He felt tempted to put his fist through the delicate sinuine screen that carried the transmitted image of the detective in distant New York. The man's face, his expression, everything about him, annoyed Grant.

The detective waited patiently till the end of Grant's recital. Then commenced to question him.

"I am informed you were the last to come out of the alacrine gas chamber. Is that correct?"

"Yes, sir."

"Was the ray-light emitting when you left the chamber?"

"Yes, sir. Both ray-lights were in action."

The instant Grant said this he felt he had made a mistake. Yet he wondered what else could he have said? The face on the screen remained inscrutable.

The detective's next question came immediately.

"What did you do, from the time you left Slayton, till the time you entered the mess? Slayton informed me you did not enter the mess with him."

Grant explained how he had washed his hands, and generally tidied himself. The answer did not seem to satisfy the detective.

"Did you notice anyone in the corridor, or in McCurdie's room when you were in the vicinity?"

Grant's answer was emphatic: "No, sir."

Why that question, anyhow?

THE detective continued: "I have had McCurdie's mask under odifloron test. You will observe the machine at your elbow. Besides the characteristic sense odor of McCurdie, the needle registers two distinct odor-presences. I have had the door knobs of McCurdie's room, and the closet, where he kept his mask subjected to similar tests. The odor-presences tally. Judging from the intensity of the deflection, the odor-presences are all recent. The most intense deflections given by the odifloron machine are naturally those of the last presences; one of them is the odor-presence of McCurdie; the other I have identified as the odor-presence of the mechanic

who was sent by McCurdie to fetch his mask. The third presence I have yet to identify. Please make an odor-presence of yourself on the piece of boronoid next to you. Then place it in the reception closet of the machine. When you have done this, stand back so I may observe the machine's scales."

Seeing Grant's expression, the detective added, "Take no exception, Mr. Grant. I am only performing my duty. I have examined everyone in any way connected with McCurdie's death in the same manner."

Grant made the impression with his hand, and put the jelly-like substance into the reception drawer of the odifloron machine. He pressed the little ivoroid button as the detective requested. The needle of the machine crept over the graduated scale and came to rest. Grant saw the detective examine the reading on his screen with an image intensifier. He checked the figure given by the needle against a set of figures he held in his hand. Grant tried to see what the figures were, but could not. The detective's instinctive and instantly repressed smile of satisfaction was reproduced on the screen.

"That will do, Mr. Grant. You may release the button. And go now. You will hear from me later."

Grant left the television booth, his knees like water under him. He was as white as a piece of lackrade, and trembling, he took up his position at the main control panel. He heard Slayton's voice as from a dream. "Heavens, old man, judging from the minutes you were gone, and your expression, they seem to have given you a pretty bad time."

Grant smiled faintly in answer.

A few minutes later Grant saw the little four-wheeled truck, resting on absorbine tyres, containing the transmitter box and voice reproducer, being wheeled towards the gas storage chamber.

Slayton was called across, and he saw him enter the first door of the alacrine storager. Lopez also accompanied him.

Grant highly resented Slayton being called in instead of himself. He wished he knew what was happening behind the twin doors. The detective was apparently examining the interior of the gas chamber through the portable televisior.

The men were gone an eternity, or so it seemed to Grant. He kept his eye on the pressure-cylinder gauge. The pressure was steady now. They must have found the safety valve leaking, and tightened it up.

More odor-presences and evidence against him, thought Grant. A wave of apprehension swept over him. If he had known that there was going to be such a careful examination, he would have acted differently.

Grant was gradually losing all his nerve. He was almost ready to admit his guilt if the stern-eyed figure on the television screen questioned him again. Various wild ideas entered Grant's head of wrecking the ship, poisoning himself, or landing the ship, and trying to escape. He rejected them as useless. All he could do was to wait till he heard the verdict either way. Perhaps it was only his imagination; for no one had declared him guilty as yet.

Grant was so absorbed in his thoughts that the clanging of the engine room bell almost passed his attention. He glanced at the clock. 6.10 a.m. Time had passed quickly. Like an automaton he pressed the necessary buttons, and the great ship hovered over Peking, waiting for the usual tender.

Grant was far too busy to pay any attention to the transference of passengers. His whole attention was riveted to the door of the gas chamber.

THE air liner had been on the last lap of her voyage for about a quarter of an hour, when Slayton came out of the gas chamber, wheeling the television truck, followed by Lopez. Grant saw the two men walk to the television booth, and once again the screen on the wall blurred and the sharp-faced detective took his place on the televisior.

Slayton left the booth, and went out of the engine room door. Grant wondered where he was going. He did not seem to be consulted in the least about any of these men's actions. He more than resented it. Yet what could he do?

Slayton returned soon after, talking to the captain of the ship.

The captain entered the television booth, and Slayton came over to Grant. "Say, old chap, I'll take this job over. The minus charge yonder" (the detective in New York), "wants to see you and the old man together; suppose you're going to get your sole command job at last."

Good old Slayton, thought Grant; as yet he had no suspicion of anything being amiss.

The captain and the distant detective were chatting together. Grant opened the door of the booth, and closed it carefully behind him.

The detective beckoned the two men to sit down. "It may be a question of a quarter of an hour or so."

He resumed in concise sentences, "You asked me to find the cause of McCurdie's death, whether accidental or intentional. I have done so. The chief engineer was murdered."

"As I expected," put in the captain. "That vile rat Lopez, I suppose."

"That's where you're mistaken," returned the detective. "The person who murdered McCurdie is at this moment in the booth!"

The captain started visibly.

"You imply Grant murdered McCurdie?"

The detective inclined his head. "I expected it to be a bit of a shock for you, sir, to find Grant, your clever second engineer, a murderer. I will not weary you with details, but suffice it to say that if Grant had made allowances for odor-presences, an innocent man would have been held responsible for McCurdie's death."

Grant was leaning back in his chair. He seemed crippled by the blow—broken and useless. He was sobbing. He admitted his guilt. What did it matter? He was beyond caring.

The captain passed a handkerchief over his feverish brow, and spoke to the detective. "I never should have thought it so—never. I have always had the utmost confidence in Grant."

The blow had been great. Grant's benumbed brain was just beginning to function again. The captain and the detective were still conversing together. He paid no heed to what they were saying. Grant was thinking. Visions of the gloomy detention room, the solitary ray light, the loneliness, the disgrace, the dishonor.

God, it could not be! It must not be! Grant spoke out, interrupting the voice of the detective. He turned to the captain: "Yes, sir, I did it, though God only knows what made me do it. I was a fool, but I am will-

ing to take the consequences. There is one point I should like to ask, sir, one final request before I leave this ship."

His voice was pleading.

"Sir, as you know, if I am confined, the engineering staff will be left very short-handed. Slayton, who I presume will take my place, has had very little experience in landing this craft. I should like to suggest that as a final favor, you let me bring this ship into New York."

The captain turned to the detective, on the screen, and looked at him askance.

The detective replied, "Your request seems fairly reasonable, Grant. As yet your guilt is unknown to any save ourselves. Till your trial in the New York Supreme Court, it will remain secret."

Grant's heart leapt. Hope again took a place in his being. The detective looked at the captain. "Sir, do you see any harm in his request?"

The captain shrugged his shoulders.

"Well, then, Grant, I think you may take it that your request is granted."

Grant turned to leave the television booth, his head erect once again. The detective's voice called him back. "Just one minute, Grant. Under the circumstances, we cannot afford to take any further risks. Just above your head on the main panel, obeying my orders, Lopez will connect up a microscopic television screen, and a ray gun remotely controlled from this New York office. I shall pledge Lopez under oath to secrecy. He will not even know the object of the machines. You will be at the main panel till the end of the voyage, and, Grant, I shall be watching you the whole time. Should you make any strange move or try to escape, I shall have no compunction in killing you. I will summon Lopez, and give him the necessary directions. Please ring up the electricians' quarters."

Grant did as he was bid. He sank back in his chair, and heard Lopez and the detective conversing. He did not pay attention to what they were saying. He did not care. Hot shame seared Grant's soul. They did not trust him. They would not take his word. Great God, how that one act had ruined his whole life! His ideals of being in command, overturned and shattered.

Grant's reverie was broken by the speakerphone buzzer. He pressed the button. It was Lopez's voice, saying the ray and image finder had been fitted on the main panel as the detective had ordered. The detective told Grant to take up his post at the panel.

Grant left the cabin. He seemed an old man. He was sunk deep in despair. He relieved Slayton without a word, and took up his post.

As the detective had ordered, clamped to the wall, unnoticeable save at close quarters, the little violet-glass reflector of the ray gun was pointed at him. Level with his shoulders, a little disc of crystal glass about two inches in diameter was the image pickup of the television transmitter.

Grant was cornered, and he knew it. Worse than useless to attempt escape.

Grant stood at the panel, like a statue, oblivious of everything around him. Once or twice he pulled himself together to check the meters below him. Oh, but it was hard!

Grant seemed to have lost all count of time. When the engine room bell clanged, he realized with a start

(Continued on page 854)

What Happened to Professor Stockley?

By E. M. Scott

IN its very simplification, life is becoming ever more complex. There was a time when a robber could, by just running out of some ambush, stage a hold-up and get away with it by sheer force of arms. Now, however, one is not safe anywhere, even armed. There might be any number of inventive geniuses in the midst of vast criminal organizations—therein lies the danger. What the bitter scientist in this story concocted was said by everybody to be absolutely impossible—yet read what really happened.

Illustration by MOREY

TO remark that Pittsburgh was aroused was to put the matter lightly. We had better say that the well-to-do class of the city were suffering from an acute state of nerves. A full sized and active terror was abroad. An agency that plundered alike, the money coffers of rich men and the jewel cabinets of wealthy women. A mysterious something that did not hesitate to kill upon occasion. No one who had seen it, lived to tell the tale. The only sign of its presence was a trail of theft and murder. The poor alone were exempted by the mystery criminal, who for three months, and with constantly increasing boldness and frequency, had killed and robbed the city's most substantial citizens. The poor remained unmolested.

Traps, numerous and carefully constructed, were laid and remained unsprung. Dragnets were thrown out by the frenzied police and hundreds of denizens from "The Strip" and "The Hill" were brought in and questioned, but not a trace of the vanished loot was found nor any clew that led to the detection of the mysterious robber and slayer. Twice it appeared that he must be apprehended, but by some magic-like quality, he had been able to walk out through the very grasp of his would-be captors.

The first of these occasions occurred about one month after his first appearance. The circumstances on this occasion were such, that even to the practical minded headquarters men they strongly smacked of some super-human agency.

On July 15th, John Golden, wealthy New York sportsman, lost a large sum of money that was taken from his

room in the General Washington Hotel, the city's leading hostelry. Golden was in the bath of his suite and had left his coat, containing his wallet, in the bedroom. When he returned, both coat and wallet had disappeared. Later the coat was found lying on the roof of a neighboring building, a structure which was separated from the hotel by a wide court and was several stories lower than Golden's room. Needless to say, the wallet was missing. During the same evening two lesser robberies were reported by guests of the hotel.

Despite the old adage that "lightning never strikes twice in the same spot," the management of the General Washington believed that the thief, whoever he might be, would return to so profitable a hunting ground. Acting upon this presumption, the regular staff of house officers were re-inforced by a strong contingent of Pinkerton men, furnished by the local agency, as well as a detachment of detectives from police headquarters.

The chief house detective assumed charge of the operations and organized his forces in what he deemed to be a strategic manner. One officer was posted on each floor of the building, while a flying squad, under his own command, circulated from floor to floor ready to throw the weight of their presence wherever an emergency might develop.

All went well until 11.00 P. M. Then a scream was heard from a room on the fourteenth floor. The occupant, it was found later, was Hendrick Maartin, a diamond merchant from Amsterdam, Holland. When the cry was first heard, Plain Clothes Officer O'Shea, of the city detective bureau, was patrolling the floor within sight of the door of Maartin's room. O'Shea blew his riot



It was only the work of an instant for me to raise the window and to step out into space.

whistle and then rushed in the direction of the sound. For a moment he was unable to determine from which of three or four rooms the sound had issued. Then a feeble groan followed by a dull thud placed the disturbance in room No. 1416. Both door and transom of 1416 were locked and the officer was unable to enter the apartment. While he stood there fumbling with the door, the flying squad, which had heard the alarm, arrived. The house officer carried a master-key and even as he fitted it into the lock, all heard a footfall within the room, then the sound of a window being raised—then silence.

The entire party rushed into the room. The lights were on and their blatant glare disclosed the occupant of the room, clothed in his pajamas, lying face down upon the floor, dead. His skull had been crushed by a heavy blow from some blunt instrument. One of the outer windows was open. The officers hurried to this opening, but look where they would, up and down, they could see nothing. Neither did a search of adjacent rooms or of the neighboring floors net any result. Maartin's room was not within reach of any of the fire-escapes or of adjacent buildings, and there was no sign of a rope or other means used by the murderer to escape. It was several stories to the hotel roof and a sheer drop of one hundred and fifty feet to the alley below.

Examination disclosed that the jewel merchant's cases had been rifled and approximately one hundred thousand dollars worth of gems stolen. No trace was found of either the criminal or of the diamonds and the crime remained among the city's list of unsolved murders.

The second instance occurred six weeks later and about two weeks prior to the opening of this narrative. Miss Olive Odell, a daughter of one of the state's oldest and most blue-blooded families, was wantonly murdered in her room on the third floor of the family mansion in the suburbs of the city.

The Odells were entertaining a number of friends, both house guests and local intimates. About 9:00 P. M., Olive Odell, a girl of twenty, and two of her guests, went up to their rooms on the third floor. These two, Helen Morris and Ruth Bolin, school friends of Miss Odell's, occupied a room directly across the hall from that of their hostess.

Misses Morris and Bolin entered their room. A moment later they heard a wild scream from the direction of Miss Odell's chamber. Both rushed to her door, but found it locked. Their cries quickly gathered a crowd of guests and servants who burst open the locked door. They found Miss Odell murdered. She had been stabbed to the heart with a long clasp knife, whose handle still protruded from her body.

The door of the wall safe, in which the young lady kept her jewels, was open and its contents had been removed. It would appear that the dead girl had surprised the burglar at work and paid with her life for her temerity. The murderer escaped through the open window. However, a diligent search failed to disclose how the slayer reached the ground, a distance of forty feet. Neither did the soft earth below disclose any trace of footprints or other clues.

Colonel Odell, the murdered girl's father, offered a large reward for the apprehension of his daughter's slayer; and although city police and many private detective agencies labored diligently for the golden prize, it remained unclaimed.

These crimes are only two of many and are specifically mentioned only because they tend to show the elusiveness of the mysterious criminal. Many and wild were the surmises as to the identity of this terrible unknown and the means he used to evade capture. Some had it that he traveled by airship in his nocturnal wanderings. Others inclined to superstition, openly hinted at black-art and fourth dimensions.

A dozen murders and a half-hundred robberies, all unsolved, were sufficient reasons for the hysterical condition of the police department. Newspapers flaunted blatant headlines, and described official inefficiency and

incompetency. The man on the street went even farther and discussed an unholy alliance between the underworld and the city's politicians and policemen.

The administration, elected during one of the city's periodical reform waves, was sorely perplexed as to what to do. They had already put through two minor police shake-ups, and now, in face of the public clamor, it appeared as if they must completely revamp the entire department. The mayor, a puritanical nonentity, held long but ineffectual conferences with his equally inefficient cabinet. And while many suggestions were made, none tended to offer a substantial solution to the vicious problem; so the city government simply drifted, hoping, like Micawber, for something to turn up.

In the meantime the chief of police, who had grown old in the city's service and was efficient enough against ordinary criminals, lay awake nights trying vainly to think out a way from this increasing wave of crime, which like a Juggernaut threatened to crush him under its weight and to leave him lying there maimed and dishonored, his lifetime's service of honest police work gone for naught.

THEN about two weeks after Miss Odell's murder, the reign of violence ceased as suddenly as it had started. One week, two, three and then a month passed without the consummation of a single crime that could not be traced to ordinary criminals and their matter-of-fact methods. The police department, worked up to a high tension by the mystery criminal, quickly pounced upon and secured the ordinary varieties of the breed.

The mysterious crook and his deeds in the background, the newspapers looked about for other circulation boosting material, and found it. Professor Lee Stockley, world famous inventor, scientist, philosopher and metaphysician had mysteriously disappeared. What had happened to him? Was he a victim of foul play or had he wandered off under a spell of mental aberration?

Professor Stockley owned and occupied a four-story brick building on Ross Street. This structure, while ancient, was substantial in its character and commodious in its appointments. Here its owner lived alone, his time occupied with his experiments to the exclusion of all other matters.

It was on the eighteenth of September that Professor Stockley was last seen or heard from. He had been scheduled to address a meeting of a technical society on the evening of this date, but during the afternoon he had telephoned the president of the organization and requested that he be excused on account of the urgency of other affairs. However, he said nothing about leaving the city. The gentleman to whom he talked, Mr. H. F. Kling, of the Kling Engine Works, remarked that the professor's tones were high pitched and that he appeared to be laboring under a strain of excitement or nervousness. This fact in itself was not an especially pertinent one; as Professor Stockley's acquaintances, for he possessed no intimates, had long noted the growing trait of irritability and nervousness in his character.

The missing man possessed no known relatives or close friends, at least not in Pittsburg, so that it was doubtful how much time might have elapsed before his disappearance became a matter of general knowledge. But for the arrival of his former classmate and one-time business associate, Professor Hugh Lantry of Hoboken, New Jersey, much more time might have elapsed.

Professor Lantry arrived in Pittsburg early in October. After an ineffectual effort to secure admission to his friend's quarters, he circulated around the neighborhood, and picked up such facts and gossip as he could secure. This information, no doubt partly fiction, still had a ring of truth and had been reluctantly given. It was of such a disquieting nature that Professor Lantry decided to seek the assistance of the police.

Admitted to the office of Chief of Police Paul Westley, the visitor identified himself and his former association with Professor Stockley; then he expressed his fears for the latter's safety. After listening to Professor Lantry's explanations, Chief Westley agreed that the matter merited an investigation and was himself one of the party that forced their way into the Stockley Building and so were the first to view its astounding contents.

First, however, let us note the information that Professor Lantry had put into the hands of the police.

(Letter from Professor Stockley to Professor Lantry.)

May 5th, 1930.

My Dear Lantry:

In accordance with our custom of the past, that we acquaint each other with any vitally important results attained, I am writing to inform you that I am on the eve of a most stupendous discovery, which may well annihilate some of the long established laws of the universe.

I shall not go into details in this communication, but will reserve them until I have concluded some further experiments. However, I will say that my investigations deal largely with the force of gravity as it is now understood to exist.

Yours sincerely,

LEE STOCKLEY.

(Letter from Professor Stockley to Professor Lantry.)

July 2nd, 1930.

My Dear Lantry:

I have received your communications some time since. I have been somewhat indisposed and very busy or I would have written to you sooner.

As to my discovery, I find that my final investigations require more time than I had anticipated, but I expect to have something vital to report within a short time.

Yours in haste,

LEE STOCKLEY.

"These two letters, Mr. Westley," Professor Lantry explained, "are the only communications I have received from Professor Stockley."

"I promptly answered my friend's first letter and after congratulating him upon his success, I made several pertinent inquiries as to the nature of his experiments. I received no reply and after several weeks I sent a second letter, in answer to which I received the second communication, which I read to you.

"During the months of July and August I sent Professor Stockley two letters, to which he did not reply. Then during September, worried by my friend's silence, I again wrote him two letters, both of which were returned to me marked 'Unclaimed.'

"Since reaching Pittsburg, I have been making inquiries regarding Professor Stockley, and among other things learned that for a long time no mail has been delivered at his residence, but that upon his personal instructions he received it at the General Delivery window of the downtown postoffice. About September first,

he ceased calling for his mail, hence the return of my two letters."

"Furthermore, Mr. Westley," Professor Lantry continued, "In my investigations in the neighborhood where Professor Stockley lived, which by the way is none too select, I learned that my old friend has been acting in a very peculiar manner for the past several months. During his meager communications with his neighbors, the professor has made several ambiguous remarks which they did not understand, but which, to me, in the light of other events, would indicate that his brain has become diseased or that a worse fate has befallen him.

"Lee Wong, Chinese laundryman with an American education, who did Professor Stockley's washing, informed me that on one of his calls for laundry, and apropos of nothing in particular, the caller remarked:

"The day of the airship is almost past. Soon man will travel through the air without other apparatus than the clothing he wears."

"Another man, the proprietor of a small restaurant, where Professor Stockley ate many of his meals, told me, that upon several occasions the professor came into his establishment laboring under great excitement, and that once, some five or six weeks ago, he had turned to some of the other diners and in a grand eloquent manner had discoursed in this wise.

"Man shall soon overcome the so-called force of gravity that now binds him to the surface of the earth"

"The time has almost arrived when these age-old chains shall be broken and mankind will be released from their shackles and will soar through the air like birds and achieve heights now unthought of."

"THESE and many other things, I have heard," Professor Lantry concluded. "My long acquaintance with Professor Stockley leads me to believe that there is something radically wrong. For such language and actions are entirely foreign to his nature."

After some further conversation, Chief Westley, as we have already noted, accompanied by Professor Lantry and a couple of detectives, was driven out to Professor Stockley's quarters. The ugly red brick pile, with its smokeless chimneys, drawn shades and dusty windows looked even more forbidding and repressive than usual.

The officers were able to "jimmy" open a rear door and allow the party to enter. It was now late afternoon and inside the house it was quite dark. Some one found an electric light switch, so, turning on the lights as they advanced, the investigators traversed the lower floor without any material result. The rooms were vacant except for a few crates and some broken furniture, while everything was covered with a coat of dust.

An examination of the next floor disclosed that it had at one time been used as a laboratory and workshop, but there were no signs of a recent occupancy. Everywhere they found dust and neglect. A number of tables and benches were littered with test tubes, boxes and bottles of chemicals and various compounds and reagents, while in the corner of one apartment, there was a great heap of wood and metal models of machine parts. These objects, while no doubt of interest to the technical mind, conveyed no information as to the present whereabouts of their missing owner.

The third floor was next visited. Here was Professor Stockley's living quarters, also another well-equipped la-

boratory. The rooms were empty and a thin film of dust and the stale air of the place indicated that they had not been used for several weeks. The fourth floor, an attic of sorts, was entirely empty and had seemingly not been used for years.

The investigators first examined the professor's bedroom, fearful of what they might find there. The bed, however, was empty, although it had been made up ready for use, with the blankets turned neatly down.

They next entered the large apartment that had been used by Professor Stockley as a library and office, and began to inspect its contents. Several filing cabinets and two large desks were filled with papers and letters. These were of former years and their contents seemed of a routine nature.

Two sides of the apartment were lined with long shelves that reached from floor to ceiling; these were filled with books and bound volumes of technical papers, many in foreign languages. This literary accumulation had overflowed its allotted space and untidy stacks of books and manuscripts were piled upon tables, chairs and even about the floor.

In one corner of the room stood a heavy, old-fashioned metal safe. Mechanically, Chief Westley tried its closed door; to his surprise it came open. The combination had not been set. The inner doors were closed but not locked and the chief flung them open to disclose a most extraordinary and awe-inspiring sight. The upper compartments disclosed a pile of letters, a journal, a ledger, a cash box, a memorandum-book and such sundry articles as one would expect to find in any private safe. But the bottom of the vault, a deep, high compartment, was a veritable miniature edition of the fabled treasure cave of Ali Baba.

There were high stacks of yellow-backed currency, neatly arranged in thick packets, mingled with heaps of jewels and precious stones, set and unset. Strings of pearls, collars of diamonds, ruby brooches and little pyramids of unmounted diamonds. To the astounded eyes of the startled explorers it seemed as if all the wealth of the city were piled here in Lee Stockley's musty old safe.

Chief Westley gingerly poking among the heaps of rings and necklaces suddenly stiffened, then stepping back, he held up a glittering diamond collar.

"This," he stated in his most official tone, "belonged to Olive Odell; and was listed as one of the articles stolen at the time of her murder. I recognize it from the description, and here, engraved on the setting, is her name."

The little group stared at the glittering object in silent consternation. If this were indeed Olive Odell's necklace, and there did not appear to be much doubt of this fact, then Professor Lee Stockley, nationally honored scientist and inventor, must be either the fence of the mysterious bandit, who for months had terrorized the city, or as now seemed more probable, was the actual criminal himself.

Professor Lantry, surprised, but still incredulous, began an inspection of the papers that reposed in the safe, thinking that perhaps they might hold a clue to the mystery. One of the first objects that he examined was the neat leather-bound memorandum book that lay upon the top shelf.

He glanced casually at the first written page; then, after a moment he began to rapidly leaf through the

volume, reading a paragraph here and there. After a moment, the Hoboken scientist turned to the nervous chief of police.

"I believe that in this book," he explained, "we will find a solution for all the questions that now confront us and for many other things as well; at least this is my belief."

"This memorandum book," Professor Lantry continued, "contains a diary kept by Professor Stockley and I believe that it is a master-key to the mystery of its author's disappearance. It is written in German, a language in which both Professor Stockley and myself are proficient."

"With your permission, Chief," he concluded, "I will read it and then translate it for your benefit—at least such portions as seem to bear upon the matter in hand."

"Go ahead, Professor," the chief acquiesced. "The truth is, I am astounded at what we have found here and will welcome any solution. My duty is plain, but I will make no move until you have time to read that document."

"In the meantime, Sam," he said, turning to one of his subordinates, "go downstairs and secure the door that we forced open. We want no prowlers in here at this time."

Then, while Professor Lantry sat down at his sometime associate's desk and read with shocked amazement the other's story of the past year, Chief Westley and his aids began a systematic examination of the scintillating treasure that reposed in the missing scientist's strong-box.

The minutes lengthened into hours and still the four labored on. An oppressive silence pervaded, broken only by the sharp intake of Professor Lantry's breath as he read some especially astounding paragraph, and by the occasional undertone comment of one or another of the officers as they identified some piece of jewelry with particularly gruesome history. The chief had sent one of the detectives back to headquarters with certain instructions and an injunction to preserve silence on the Stockley investigation. This messenger had long since returned, bringing, among other things, an itemized schedule of the plunder supposed to have been taken by the unknown robber.

It was past eight o'clock and the officers had just completed their part of the work, when Professor Lantry, his face pasty white and marked with sorrow, looked up from his self-imposed task.

"AS I anticipated, Mr. Westley," he informed the Chief. "This book tells the complete story of Prof. Stockley's life from the first of the present year, and his own story of what I firmly believe to be his madness. It also gives us a clue to his mysterious disappearance."

"Much of his recorded story deals with abstruse calculations and formulas of a technical nature. I have, however, marked a number of paragraphs that tell the story of my poor friend's aberration and its outcome. These I am now ready to translate to you."

"Go ahead, Professor," the Chief urged, seating himself and motioning his assistants to do the same.

Jan. 14, 1930: I, Lee Stockley am about to embark upon one of the most stupendous enterprises ever undertaken by man; and it is my intention to inscribe here a log of my progress.

I am going to attempt to bring to a practical solution a theory that I have long held and which I now believe to be endorsed by other present-day scientists. Indeed Einstein and a few others have recently brought this before the world, which accepted it as a new theory. But as a matter of fact I had discovered it years ago, but was unwilling to give my theories to a world, containing so many skeptical people, until I was prepared to demonstrate my words by substantial facts. At last, however, after years of effort, I believe that I am on the road to success.

To put the matter briefly my theory relates to what is commonly known as the Law of Gravity and the possibility of man's ability to insulate himself against this force.

I have already demonstrated, at least to my own satisfaction, that gravity, like electricity, is an elemental force; and that it is just as practical to insulate against the restraining grasp of the former as it is to insure protection from the devastating power of the latter.

In other words, just as rubber and some similar substances serve to protect us from the electric current, so that we may handle live wires so insulated with impunity; therefore if we are able to equip our bodies with a proper insulation, we can, with equal ease, overcome the force of gravity and be able to travel through the air without restraint.

At present we are able to perform this feat to a limited extent, by the means of airplanes and balloons; but these agencies are mere subterfuges prepared to operate along with, and not in opposition to, the principles of gravity.

My intention is to first find a composition or an alloy that will provide gravity insulation. This accomplished, I will then, using this fabric as a base, design a costume or armor that will not only enable me to overcome the restraining influence of gravity, but also to retain my equilibrium while in the air. Otherwise my insulator would be a hindrance instead of an aid to my movements.

I have already spent much time and a large amount of money on these experiments, and believe that I am near to my goal, which is almost in sight.

May 6: I have accomplished that which man has called the impossible. I have overcome the force of gravity. I have discovered and perfected a perfect insulation. The possession of this gives me complete freedom of action and permits me to cast off the shackles of earth-bound slavery.

This insulation, the formula of which I shall not record, but will retain within my brain, is of a complicated composition, and is the result of the union of metallic, vegetable and gaseous substances. The original molecules have broken up and through my secret process of amalgamation, have formed new combinations. The manufacture of this insulation is a long and difficult process, and when finished it has the appearance of a soft fleecy cloth, with a metallic luster, but can be dyed any desired color.

I first prepared a section of the perfected fabric three days ago, and that night I made my first test. I wrapped a brick in a square of the insulator and dropped it out of my window. Instead of falling to the courtyard as would ordinarily have happened,

the insulated brick remained suspended in the atmosphere, just beyond the window ledge. It hung there fixed and immovable until I reached out and drew it back into the room. With the insulator perfected, it is now only necessary for me to design a device to give me a correctly balanced equilibrium and I shall be able to move about through the air at will.

The possibilities of my invention transcend anything that man has heretofore accomplished. It will enable mankind to discard his bonds of restraint and to go where he will. Voyages to the moon, yes even to the planets, will now be within the range of practicability. It is only necessary to prepare a proper vehicle that can develop the requisite speed and at the same time protect its occupants from the terrific cold of the outer spaces.

I wrote to my old friend Hugh Lantry today. I did not give him any details of my invention as I wish to be in a position to give a satisfactory demonstration of my discovery before I submit it to his critical scrutiny.

I can see a vast fortune in the development of my discovery and as soon as I have perfected a means of securing and retaining my equilibrium while in the air, I shall withdraw my funds from other matters and begin the manufacture of the gravity insulator.

June 10: A most unexpected calamity has befallen me. I am no longer a wealthy man. This old building and its contents are the total extent of my worldly possessions. The bank in which I had deposited my fortune has failed. The fruits of my lifetime's labor have been swept away. It is reported that the defunct bank will repay less than ten per cent to its depositors, and that the payments will extend over a long period of time. A group of rich speculators used the institution's money for their own purposes and wrecked it and themselves. How I hate the rich—a race of grafting parasites. They should all lose their ill-gotten wealth.

This disaster coming at the time when I had just solved the problem of balance and locomotion while insulated against the force of gravity seems more than I can bear. I shall write no more tonight. I hate those smug rich speculators.

June 18: My gravity resisting insulator is a success. I can now go when and where I will, free of the earth's restraining influence. More than that, I have found a way whereby I may regain my stolen fortune.

I have prepared my apparatus in this manner. I first had a jacket, shoes and a pair of trousers made from the insulating fabric. I found them to be somewhat bulky, but not uncomfortable. Then one night I dressed myself in these garments and with serene confidence in their effectiveness I stepped out of my window into space. Nothing happened. I simply remained there suspended, as it were, in mid-air, in the same manner as the brick had been in my earlier experiments.

I now found that my own power of locomotion was sufficient to propel my body through the air; but that when I moved I had little control over my movements. I was like a child learning to walk, only my progress did not improve with practice. I

had neutralized the attraction of gravity but had substituted nothing in its place. Therefore I was like a ship without a rudder, able to keep afloat, but the prey to every outside influence.

To combat this situation, I have now utilized my later invention, a device for retaining equilibrium and controlling motion while traveling in space. I shall not elaborate upon the mechanism of this apparatus, for the same reason that I have not recorded the formula from which my insulator is made. No one can steal something that I retain within my own brain. I will state, however, that this device is evolved from electrical action and is in the form of a ray. This I have named the "Neutral Ray" for not only are its emanations of a neutral shade and invisible to the naked eye, but they possess the power of neutralizing any outside force with which they come in contact. The greater the hostile influence the stronger the power of the ray. For the "Neutral Ray" has the quality of increasing automatically in the same ratio as the resistance it meets.

In generating and condensing my ray, I found that high speed, but no great power, is required in the motor and generator. The former requirement is secured by adequate gearing. The latter is so infinitesimal, that it is produced by a clock-like engine, that is wound up with a key and which operates for many hours without rewinding.

This entire mechanism is so small that it is contained in an aluminum case ten by fifteen inches in dimension and scarcely three inches thick. This cabinet I carry strapped to my back and to better conceal it, I have had a sort of a loose fitting ulster made from the insulating fabric. This ulster is gray in color, as is the cap that I have prepared from the same material.

In the manufacture of these various articles, it was necessary that I secure some outside assistance. This work I had done at several small shops, widely separated and where I was unknown.

Dressed in my insulated garments and equipped with the Neutral Ray apparatus, I once more stepped out of my third floor window. I now found that I could move about with ease, and that I retained perfect control of my movements. I was now able to move through the atmosphere with as much security and speed as I could have done on the pavements, several hundred feet below. I also found that I could change my elevation just as easily as I could climb or descend a gentle slope on the surface of the earth and with no more effort or fatigue.

While I thus wandered about high above the somnolent city, for the hour was late, I could not help thinking of my lost wealth and how, through the dishonesty of others, I was deprived of my opportunity to manufacture and market this greatest of modern inventions. No doubt I could secure the necessary capital from others, but only at the price of conceding my right of control in the development of my brain-child.

Once my invention was introduced, both the Insulator and Neutral Ray would become necessities for many purposes and in numerous channels. Airships so equipped could pass far beyond the edge of the earth's atmosphere and penetrate the outer spaces of the universe. They would make it prac-

tical for man to visit the moon; even voyages to the distant planets would not be impossible. In addition to the ray and the insulator, the only requirement would be a vehicle that could generate the requisite speed and at the same time resist the deadly cold that pervades the realms of space. These difficulties could no doubt be overcome. Indeed I believe that with some slight alterations and modifications, my Neutral Ray will overcome these impediments to celestial navigation. I shall experiment further.

At last, I decided to return home. It was late and I needed my rest. As I approached my part of the city, I passed one of the city's huge sky-scraper hotels. With one exception, all of the windows of the upper floors were dark. In idle curiosity I drew near to see who might be awake at this late hour. A glance through the open window showed four men seated around a table engaged in a game of cards. It was evident that they played for large stakes, for great piles of bills and stacks of poker chips stood beside each player. A decanter and glasses of liquor stood on a side table and all four were indulging freely.

A party of rich gamblers in an all-night game, I decided, and was about to turn away, when all four suddenly leaped to their feet and rushed from the room, leaving the money behind them. I wondered at their action. Later I learned that some one had turned in a false alarm of fire in the building.

It was then that the temptation to steal first came upon me. Here was money for the taking. These men were rich and would never miss this wealth that they had already put to the hazard of fortune. The thought had no sooner entered my brain than I acted upon it. It required less than a minute to enter the vacant room, cram the sheaves of bills into the pockets of my ulster and return to the outdoors.

I now made my way to my room with all speed and drawing the shades I counted the fruits of my first theft. The amount that I had so secured astounded me. There were over forty thousand dollars, all in bills of large denominations. I remained in-doors all day and have carefully searched the newspapers for a report on the robbery, but none appeared. I now believe that the matter was hushed up and no report made to the police.

July 4: I am now fully committed to a career of crime, so-called, although in my own mind I feel that I am only recovering my own stolen wealth. The rich plundered me. Why should I not retake what is my own? Pleased with the success of my first venture I have made several more expeditions, all of which were successful. Equipped as I am, with the means of traveling through the air at will, no rich man's goods are safe from my raids. I now carry a fairly complete line of burglar tools, including a heavy "jimmy" a long-bladed clasp knife and a sack in which to carry my loot.

I have had another letter from Lantry, asking about the progress of my invention. I am sorry that I ever confided in him. However, it is too late to lament that now; but I wrote him that I have been delayed in my experiments and will communicate with him later. I hope that he is satisfied and remains in Hoboken. It might prove embarrassing if he came to Pittsburgh.

By the means of my robberies I have now accumulated about one hundred thousand dollars in currency and several valuable jewels as well. For to my mind the rich woman is no better than the male of the species, and I am collecting my debts from both. If nothing untoward occurs I shall continue to levy tribute upon the wealthy class of the city until I secure funds sufficient to build and equip a factory for the manufacture of my gravity insulator and neutral ray machines in large quantities.

July 17: I am a murderer. I have killed a fellow-man. I went to rob, not to slay, but I was trapped and to insure my escape, I was forced to strike the other down. I had only intended to stun him, but in my excitement the blow was harder than I had intended.

I had in the past secured several large sums from the guests of the General Washington Hotel and last evening I returned there. While scouting around the side of the building I noticed, in one of the upper rooms, several pieces of luggage marked H. Maartin, Amsterdam, Holland. This recalled to my mind an item I had read during the day about this party, who was a diamond salesman, and that he carried a large stock of stones.

This was a haul worth making. I quickly pried the window open and entered the room. The Dutchman's valises were locked, but they were not proof against my powerful "jimmy" and in less than five minutes I had opened and gone through the merchant's bags and removed the most valuable part of his stock. Then, just as I was ready to depart, a door opened and Maartin, a large, powerful man, rushed into the room.

When I first entered I had closed the window and drawn the shade, otherwise I could still have escaped. As it was the Hollander grappled with me and at the same time began to shout for help. We struggled for a short time, but he was too strong for me, and to complicate matters I heard some one try the door.

I knew that I must get away. It would never do for me to be taken thus, red-handed. I wrenched loose my right arm—I had still retained hold of my "jimmy"—and brought the heavy iron bar down upon the other's head. He promptly released me, and with a single groan fell to the floor. It was only the work of an instant for me to raise the window and to step out into space.

I quickly surmounted the top of the hotel and in that way escaped. The newspapers and the police have made a great hue and cry over the matter, but I am sure that they have no clue. Certainly no one will think of connecting Lee Stockley, the scientist, with the dangerous criminal, who has so successfully eluded the police.

Up to this time I had never injured, much less taken the life of a human being. However, I find to my surprise, that the fact has not greatly affected me. The rich have stolen my wealth and would allow me to die in poverty, why should they not pay me in blood as well as in gold for the sins of their class?

Aug. 20: I have made several successful raids since I killed Maartin. Several times I have had to kill, but this no longer troubles me in the least. In-

deed it has, I might say, become a pleasant duty. I no longer hesitate to kill my victim, if by so doing I can expedite my work of robbery. Where at first I was careful only to loot vacant apartments, I now boldly enter dwellings and strike down the occupant and take his valuables. In this way I accomplish the double purpose of augmenting my capital and of revenging my injuries upon a class of society that wronged me. I have no fear of capture, as I can always elude any pursuers.

The police of the city are hysterical and have made many foolish attempts to capture me, but I laugh at them and walk out under their eyes. That fool, Lantry, keeps writing to me, but I refuse to answer his letters. A few weeks more and I shall have enough wealth for my purpose. At first I could scarcely wait until this time arrived; but now I sometimes wonder if I shall not miss the excitement of my present life. Then again, at times I am almost afraid to proclaim my discovery. What if the police should become suspicious when they learn that I travel through the atmosphere at will.

Sept. 3: Last night I killed a woman—a young woman, rich and beautiful. This crime, like my first murder, was unpremeditated.

I had gone to the Odell mansion. After securing some jewelry from a safe, in an empty room on the upper floor, I was about to leave when a young girl entered the apartment and emitting a wild shriek, threw her arms about my neck. I had used a large knife that I carried to force the jewel case and still had the weapon in my hand when the girl seized me. I tried to free myself from her grasp and in the struggle I inadvertently stabbed her. In a moment she was hanging, a dead weight, limp in my arms.

I laid her on the floor and made my escape. Already there was some one trying the locked door. I at once came back to my apartment and locked the night's plunder in my safe, along with my other loot. I was completely worn-out and soon retired, but could not sleep. Whenever I closed my eyes the girl's face stared at me over the foot of my bed. Toward morning, I finally fell asleep but even then my sleep was fraught with dreams of the dead girl. I wonder if I was wrong to wage this campaign against the rich. But no—it is only that I am nervous. However, I have enough money for my purpose and I have decided not to go out again—at least not for the present. To take my thought from this thing, I will begin an experiment that I have had in mind for some time.

Sept. 18: I make this a final entry in my journal. I feel strangely elated tonight. And why not? Have I not demonstrated that I am far above the common man. Nay, am I not more than a man? Do I not deserve a place among the gods?

I have overcome the force of gravity and am able to walk among the clouds whenever I will to do so. Yes, I have accomplished even more than this. I have constructed a space vehicle in which I intend to leave the earth and travel among the stars; as the gods of Homer did. I shall leave behind no definite plans or specifications of my space ship; but will carry them along with my other secrets in my voyage through space.

(Continued on page 854)



Standing just inside at a platform was one of the overhead monorail cars, but much larger and more elaborate than the first one we had seen.

The Blattids

By Morrison Colladay

Author of "The Burning Swamp"

THINGS are not always what they seem. For instance, when some scientists of note specifically stated that volcanic activity in a certain part of the country was highly improbable, the natural conclusion was that what seemed to be a volcanic eruption was only a display of the aurora borealis—despite the fact that the aurora borealis was never known to be visible there either. The truth of the whole matter, though, never dawned on anybody, until it was proven by the only two eye-witnesses to a similar display in another region.

Illustrated by MOREY

THREE months have passed since Jim Weeks and I discovered the giant roaches at the meteor mound. After our escape from the burning swamp, we went back to Memphis and got a room in a cheap hotel, where we could watch the thick column of smoke from our windows. We were convinced that the roaches with their irresistible ray tubes were getting ready for a war of extermination against the human race. We wanted to warn people of what was likely to happen, but a few attempts convinced both of us that no one would take seriously the story we tried to tell.

That was why I wrote out the account of what had happened from the time we saw the first meteor until the revolving ray set the swamp on fire. I went over the pages to see if I had forgotten anything and Jim read with me over my shoulder.

"What are we going to do with it now I've written it?" I asked after we had finished reading it.

"I'm blessed if I know," he answered with a puzzled frown. "You wouldn't think people would be such obstinate fools."

A brilliant idea struck me. "I'll tell you what I'm going to do. I'm going to make another copy. Then I'm going to mail one of them to the President of the United States and the other one to the Secretary of War."

"They'll never even see them," scoffed Jim.

"Maybe they won't, but someone will. I bet someone reads every bit of mail that's directed to the President."

So that's what we did. I made the extra copy and we mailed both of them that same day.

Then we waited. Nothing happened. The fire continued to burn. We stayed at the Memphis hotel and watched the black smoke from our windows. Our money got low and it looked as if we should have to write home for more. Our boat was tied up at a dock.

"Looks as if there wasn't much use waiting around here any longer," said Jim one day. "I guess we've done our part anyhow."

"I hate to go away and leave things this way, not knowing what's going to happen," I said.

We didn't decide then, but I suppose we should not have stayed in Memphis much longer even if the swamp had kept on burning. But it didn't. The fire went out just as suddenly as it started.

One morning I got out of bed and went to the window, as usual, to look for the cloud of black smoke on the southwestern horizon. It wasn't there. I couldn't believe my eyes for a moment. Then I went over and shook Jim awake.

"It's gone!" I exclaimed.

"What's gone?" he asked sleepily.

"The smoke. The fire must be out."

We hustled into our clothes and rushed down to the wharf where our boat was tied up. The engine was balky at first, but we finally got started down the river. As we approached the swamp, we saw tied up to the levee, a fleet of the big barge-like steamers that the government uses for its work on the Mississippi. Of the fire there was not a trace, as far as we could see from the river—not even an occasional wisp of smoke.

"Those boats look as if somebody's been noticing the fire, anyway," said Jim.

I steered for the levee, but as we approached it a soldier waved us away.

"I wonder what that means?" I said, stopping the engine and letting the boat drift.

"I guess it means that the army's in charge and they don't want civilians interfering," said Jim.

"Well, these two civilians are going to interfere. Here's the chance we've been waiting for. We'll see whoever is in command and make him listen to us."

I ran the boat in beside the largest of the barges, over the violent protest of a soldier who seemed undecided whether he hadn't better shoot us. He called a sergeant who arrived on the scene just as we started for the gangplank.

"You fellows can't land here," said the sergeant.

"We've got to see the commanding officer," I said firmly. "It's important."

"What do you want to see him for?" He paused then and eyed us intently. "Say, you ain't the two guys they've been looking all over for, are you?"

"What two guys?"

"Them that was here when this blooming fire started, and wrote to Washington about it."

"That's us."

"Then the Colonel's sure going to be glad to see you. Come ahead."

That's how we met Colonel Bullus for the first time. Neither of us had thought about the little matter of giving an address when we sent off our story to Washington. It seems it got immediate action, and the engineering department of the army, which took charge of affairs, wanted to find us to learn further details. They took it for granted we were still on our boat, and they hunted for us from St. Paul to New Orleans.

The sergeant saluted when he ushered us into the Colonel's office. "Here's them guys you been looking for, sir," he said.

Colonel Bullus is probably about forty, but he looks younger. He fixed piercing blue eyes on us and waited for us to speak.

"We're the ones who discovered the meteor mound," said Jim. "We sent an account of it to Washington."

It was then we found we had suddenly become very important persons. We were made official members of the expedition, which included a party of scientists from the Smithsonian Institution. Most of the scientists were on shore examining the site of the fire when we arrived, but that night they questioned us for hours.

Jim and I learned a lot about roaches from their discussion. Their scientific name is Blattidae—when you want to be familiar, you call them Blattids. There are a thousand living varieties as well as a hundred fossil. The entomologists made us describe the creatures we saw at the mound, in the minutest detail. They decided that the gigantic invaders were a development of the *Periplaneta Orientalis* variety, which they described as large, dark brown, nearly wingless and living in colonies.

WHEN we got up the next morning, all the other members of the party were on shore. We grabbed some breakfast and started after them. The day before we had been so anxious to see Colonel Bullus that we had hardly glanced at the site of the fire. Now, as we stood on the levee and looked over the bare white dust-filled depression which extended as far as the eye could see, we could scarcely realize that a few weeks before we had poled over it in a boat.

The engineers discovered, the day the fire suddenly and without warning went out, that the ground under what had been the swamp was extraordinarily treacherous. For a distance downward, varying from fifteen to twenty-five feet, the soil had disintegrated into a fine dust, which was almost like quicksand. Anyone stepping on it was immediately swallowed up. It is assumed that several of the soldiers lost their lives in this way. They disappeared, and there is unfortunately not much question that they were sucked down into the hot dust.

The engineers began constructing a road to the mound, which they assumed from our description to be in the mathematical center of the burned district. The road was completed at the end of a week. In the meantime Colonel Bullus had insisted that we run no risks and stay near the barge headquarters. There was nothing for us to do, and we got very restless.

"I don't see that there's any more danger for us out there than there is for you or anyone else," I complained.

"Maybe not, but you two are the only persons in the world who have first-hand information about this affair. We can't take chances with you yet. There will doubtless be plenty of risk for you before we get through."

Finally he came on board one noon and said, "Come on, boys, I want you to go with me and see if there's anything you can recognize in there. Road's through and we'll start right after lunch."

We went on foot over what was practically a corduroy road. The engineers had made a mat of underbrush on the powdery earth and on top of that had placed logs. It doesn't sound like much of a road, but mules were dragging carts over it when we started.

Colonel Bullus set a pace of nearly five miles an hour, and that is fast walking, as anyone will admit who has ever timed himself on a tramp. There were ten miles of blinding white dust—that was all it was possible to see. There was nothing to break the monotony except the road which stretched before and behind us. Whenever there was a puff of wind the dust rose in choking clouds. From time to time we passed mule carts which were laboring along in the same direction.

I looked hopefully ahead for the first sight of the mound. It seemed that hours passed, and nothing appeared. At length the road came to an end at a large circular depression where men were working with shovels and wheelbarrows. Colonel Bullus stopped.

"We're there," he said.

Jim and I looked blankly from the great saucer-shaped depression to him, and then around the white dust-covered plain.

"This is the exact center of the burned area," he explained. "If the fire was set by a ray of some kind operating in a circle, this is where it came from."

"You mean the mound was where this hole is?" I exclaimed. "It isn't possible! It was at least sixty feet high!"

"Well, you see it isn't here." I suppose Jim and I looked so upset that he took pity on us. "We don't doubt your story," he continued. "We've come to the conclusion that the Blattids retreated underground after they started the fire. They must have leveled the mound, for reasons of their own—perhaps they thought it wiser to leave nothing on the surface to arouse inconvenient curiosity after the fire went out."

"But how could they level it?" asked Jim.

"I don't know what method they used, but it must

have been comparatively easy for creatures with their engineering knowledge and the machines you say they had."

WE stood around for a couple of hours in the sun, watching the workers enlarge the hole they were digging. "We're going to find out how they got away," said Colonel Bullus, "—if they did get away. If we had excavating machinery, it wouldn't take long, but there isn't any available."

The engineers had rigged up a telephone from the excavation to the government boat on which we were living. We had just returned from the site of the mound and were at dinner when Colonel Bullus was called to the phone. We heard the one-sided conversation that followed.

"... When did you reach it? ... What does it look like? ... Hm. ... Getting it pretty well uncovered? ... No chance of going through it, I suppose? ... Yes, I know we can go around it. ... I'll be out there in an hour. I've borrowed a horse. ... All right."

The Colonel came back to the table. "I haven't time to finish dinner. I've just had a message that the workmen have reached a metal platform which they're uncovering. They haven't found out yet how much there is. I'm going out now."

"How about taking us with you, Colonel?" asked Jim.

"Sorry, but I'm going to ride and there's only one horse. You're too tired for another twenty-mile tramp. Better wait and come out tomorrow morning."

If we had gone with him that night, we might have saved some lives. On the other hand, we might have been killed ourselves. "Be careful what you do," I warned him. "You don't want to run into a trap."

"If the Blattids are waiting for us underground, with the weapons they used when you saw them, we won't have much chance. But they may not know that you and Jim escaped the fire. If you two had been killed, no one on earth would know anything about them."

"But even if they don't expect an attack, and you find them, what sort of weapons can you use against them?"

"Gas. I can't tell you much about the kind we're going to use, but no Blattids or anything else can live when it's turned loose."

Colonel Bullus did not return to the boat that night. Before daylight Jim and I were on our way to the place where the mound had been. There were so many soldiers going out that the road was uncomfortably crowded.

We reached the excavation without meeting the Colonel on the road. We almost forgot him when we caught a glimpse of the great mass of the curious, gleaming metal which had been uncovered by the workmen.

It was a scene of tremendous activity. The road had been extended down to the metal surface, by beginning an incline half a mile from the excavation. Mule carts were going up and down this road in a steady stream. Soldiers were lounging around, evidently waiting for orders. I saw Lieutenant Saylor, whom we had gotten to know pretty well, directing the movement of the mule carts.

"Hello," he called to us. "How is it you fellows aren't with the Colonel?"

I explained. "Where is he now?"

"Down there in a cave they found." He pointed toward the far side of the excavation.

"What do you suppose it all means?" I asked, to find out just how much he knew.

"It's very curious," he said. "You see that metal? Well, apparently that was poured in there molten to stop up an enormous crater. I suppose this was once a volcano."

"What about the cave?" I interrupted.

"I'm coming to that. The men uncovered all this mass of metal. Then Colonel Bullus made them begin digging around it to see how deep it extended. They hadn't gone very far over there on the south side before they came to an opening under it. I suppose it was the original core of the volcano."

Jim and I looked at each other. We did not know yet how much Lieutenant Saylor had been told of the real facts. Most of the officers, as far as we could gather, knew of the fire and the efforts to put it out. They knew nothing of our experiences and nothing of the Blattids. The scientists were the only members of the party who had been told everything.

"What are they taking all this stuff down there for?" I asked, "and why all the troops?"

"Search me," said Saylor. "It's the rummest go I ever heard of. Looks as if they were getting ready for a battle."

"Where's the Colonel?"

"Down there underground somewhere. Better not bother him till he comes out."

WE wandered around the edge of the excavation while we waited. It had rained the night before and the powdered earth had hardened enough so we could walk on it without sinking in.

As we approached the dark hole which was the entrance to the cavern, I made a discovery. I always carry a pocket compass, and I pulled it out now. "Thought Saylor said this opening was on the south side," I said. "It looks nearer west to me."

Jim squinted around the horizon. "Hard to tell for sure, it's all so flat and white."

I stared at the compass and shook it.

"Broken?" inquired Jim. "I don't believe you've used it since the day we poled through the swamp—the day the fire started."

I handed it to him. "Look," I said.

"Funny!" he exclaimed. "That metal must be magnetic."

"Notice the terrific pull on the needle."

Jim studied the compass for a minute or two. Then he started to walk slowly around the edge of the excavation. The needle continued to point directly at the metallic mass in the center, except at one spot. When we reached that spot it tried to turn directly downward. "Now I wonder what that means?" asked Jim thoughtfully.

"I suppose it means there's more of the metal right under where we're standing."

"Well, one thing's certain. The Blattids didn't bring all this stuff with them. Why down there in the pit there must be thousands of tons of it. Remember all we saw—scaffolds and elevators and machinery."

"I have a theory about that," I said. "I think it's made by their ray-machines, in some fashion. I bet we'll find it everywhere we find them."

"You don't suppose they're underneath where we're standing now?"

"No, but we're standing over the cave. It must be

an artificial passage. Natural caves don't occur in alluvial soil like this. See if we don't find the Blattids have traveled underground like moles and escaped to some part of the country."

"But how would that account for the compass?" persisted Jim.

"That's what I'm trying to tell you. Of course, it's only a theory. Suppose they excavate the passage with a ray-machine. They must be using something entirely unknown to us. They couldn't do the work they do by any ordinary means. Now, wherever the machine is used, it leaves a deposit of the metal. That's my idea."

"Very interesting," said Jim. "Still, we haven't any particular reason to suppose it's true."

"Maybe not, but it would account for the facts."

"If you're right," said Jim, "it would be easy to trace the Blattids, wherever they've gone. All we'd have to do would be to find the place they started from and then we could follow them on the surface with a compass."

I looked at him blankly for a moment. "By Jove, I believe that's the most important thing that's been discovered yet!"

"Yes—if it's true."

"Well, we can soon find that out."

"How?"

"We know one spot where the compass is deflected straight downward. Presumably that's part of the cave. Now if we start from there, we ought to be able to trace the course of the underground passage by watching the compass as we walk on the surface. Let's try it."

Ten minutes later we set out on an arduous hunt for Colonel Bullus to tell him of our discovery.

We found that strict orders had been issued that no one was to enter the cave. We waited around for him to appear. Finally it dawned on us that we had nothing to eat since morning.

"It's beginning to get dark," I said. "No use hanging around here any longer."

"I suppose not," agreed Jim. "I guess we'll see the Colonel down at the levee. He surely won't stay out here another night."

By the time we got back to the river we were pretty tired as well as hungry, and we turned in immediately after we had eaten.

It was two forty-five in the morning when the catastrophe occurred. I was in a deep sleep and was awakened by the sound of shouting on deck. I was dazed and for a moment could not think where I was. I saw the extraordinary light through the cabin window, and the confused noises on deck convinced me that something was wrong. I pulled on my trousers just as the boat began to move.

When I reached the deck I realized at once what was happening. A great beam of blue light was sweeping toward us and the ground below was breaking into flame. It was a repetition of what we had seen when the first fire started. Only this time there would be hundreds of men burned to death. Colonel Bullus was out there where the beam was destroying every living thing. All the men we had seen that afternoon were there. It was just by chance that Jim and I were not.

The boat reached the middle of the river before the slowly moving beam of light touched the levee.

"We'd never have got away if you hadn't had steam up," I said to the chief engineer who stuck his head out on deck.

"Huh, steam's been up all the time we've been here."

"How did that happen?"

"I guess Colonel Bullus had a hunch we might need to get away in a hurry. He gave the order."

"There's a good many men dead out there now," I said.

He looked at me sharply. "Colonel Bullus out there?"

I nodded. Just then I couldn't speak.

The engineer scratched his head thoughtfully. "Well, I wouldn't say he's dead yet, youngster," he said. "He's a mighty smart man, is Colonel Bullus."

WHEN daylight came we landed a couple of miles downstream, hoping to find some survivors. We approached the fire as closely as we could, but there was no sign of any of the men who had been working on shore the night before. It seemed quite certain that all had perished. The fire was burning again as fiercely as it had during the weeks we watched it from our hotel window.

Jim and I wandered around all day, but there was nothing we could do. That night we went back to Memphis. Our boat, tied up to the levee, had been destroyed by the fire, as had most of the government vessels.

We wondered what the newspapers would have to say about the catastrophe. There had been a great many soldiers killed. Some of the scientists who perished were world famous. We didn't think that they could ignore the latest tragedy of the swamp, even if news of the earlier ones had been suppressed.

We found there was nothing in the afternoon papers; but it was possible that the news had not arrived in time to get in. It was when the morning papers appeared without a word of what had occurred, that we realized that the iron control of the government was still effective.

Jim and I discussed what we had better do, without getting anywhere. If the situation was serious before, it was much more so now. We had most important information which we must get before the proper authorities, but the question was how, with Colonel Bullus gone.

Then I thought of the Memphis newspaper editor to whom I had told the story of our earlier adventures in the swamp, and who had laughed at us instead of printing them. I had been very much surprised when Colonel Bullus told us that the editor had telegraphed an outline of our story to Washington that night. It was the first intimation the government had had that there was anything unusual occurring there on the Mississippi.

He was evidently in touch with affairs and knew about us. I suggested to Jim that we go to see him. Perhaps this is as good a place as any to acknowledge our indebtedness to this gentleman, who refuses to let us mention his name.

We hunted him up about ten the next morning, and I sent in word that we had come to see him about Colonel Bullus. We were ushered into his private office immediately. He was looking very serious when he shook hands with us.

"I thought you two boys were with the Colonel."

I explained the accident of our not being with him. "We aren't sure he's dead," I continued. "We think perhaps he was captured before the fire started. We've got a scheme by which we think we have a chance to rescue him, if he's still alive. But we need help."

The upshot of this interview was that we appeared

before a board of army engineers. We repeated our adventures from the beginning. We told them about the metal, and our discovery of its effect on the needle of a compass.

"What is it you want to do?" asked the ranking officer, after we had been cross-examined for several hours.

I looked around at the grave-faced men. I had a hunch that they were going to take charge of things themselves. I was very much in earnest and I made the best speech I ever made in my life. They listened attentively.

"Gentlemen," I began, "there were more meteors besides the one that landed in the swamp. We think that there are probably many more of the Blattids somewhere, getting ready to conquer the earth, and that those from the swamp have gone to join the others. We believe we can find their meeting place. . . . If the metal they use is a by-product of their ray machines, as I think it is, we shall find it wherever one of the machines has been used. There are no natural caverns in the alluvial soil of eastern Arkansas. The passage which the workmen discovered at the site of the mound must therefore have been an artificial one, formed with a ray machine. Now if we're right, all we have to do is go over the ground adjacent to the fire with a compass. When we are above the passage, the needle will point downward. After we have once found it, we shall be able to follow it to the end."

An elderly officer interrupted with a question. "Why should you boys do this instead of us?"

"Because the only chance to rescue Colonel Bullus, if he's still alive, is by some inconspicuous expedition that won't attract attention."

The ranking officer looked at us steadily while he tapped his teeth with a pencil. "If you should locate the Blattids, just what do you propose to do?"

"We'll let them capture us."

"What good will that do, even if they do capture you instead of using a ray gun on you?"

Then I outlined the plan Jim and I had decided might succeed. It must have impressed them, for they provided us with an army chauffeur and an engineering corps truck.

WE decided that if the Blattids had gathered in one place, it was probably in some great cavern, where they would be unlikely to be disturbed while they were making preparations for their warfare on humanity. There are no caverns of any kind in eastern Arkansas or western Tennessee. But in western Arkansas, in Newton and Washington counties, are enormous caves which have never been explored. Situated in the heavily wooded, sparsely settled Boston Mountains region, they would be an ideal refuge for the Blattids, where they could mature their plans undisturbed by human beings.

We were so sure that this was where they were that we confined our search for the beginning of the underground passage to the territory directly west of the burning swamp. It took us only four hours to discover a place where the needle of the compass was violently deflected. After that, all we had to do was to walk along the surface, carrying the magnetized needle. When we were directly above it, the needle pointed straight down. If we wandered to one side or the other, the needle was deflected at an angle from the perpendicular.

There is not space to tell much about that journey. The eastern part of Arkansas is mostly swamp. The

railroads west from Memphis run for miles on high embankments, and the settlements consist of unpainted wooden shacks erected on stilts. Fortunately it had been a dry season and the truck was able to find passable roads without getting too far away from us. As for us, we waded through swamps, pushed through almost impenetrable underbrush, tramped over farms and through woods, always following the deflected needle of the compass.

At night we hunted up the truck. Bill, the chauffeur, was also cook. Each day he laid in supplies, and we camped out. If we hadn't been rather heavily weighted down with the responsibility of what we were doing, it would have been a glorious adventure. As it was, I don't believe we would have traded places with any other two men in the world. The only thing we were afraid of was that the trail would give out. It seemed impossible, as day after day passed and the miles accumulated, that the Blattids could dig an underground passage so far. They were certain to encounter natural caverns as soon as they reached the hilly part of the state. Then there would be no metal to attract the compass. That was the way we reasoned, but we found out afterward that we were wrong.

Fortunately for us, wherever they traveled through natural caverns they built bridges over chasms, pavements over uneven bottoms, even guard rails of the unknown metal. Therefore our compass continued to trace the course they had taken.

Occasionally the trail would lead us to the bank of a river. We would cross and sometimes spend hours picking up the thread on the opposite side. At one place the passage ran several miles below the bed of a river, and it was two days before we picked it up again. Another time we almost gave up in despair when we could not find it after three days search on the opposite bank. Then it suddenly occurred to me that the passage might possibly have gone under the bed of the river and then turned back to the side from which it had started. We crossed back to the eastern side of the river and in a couple of hours had picked up the trail again.

This all took a great deal of time. If we had been getting the Memphis daily papers I am quite certain either Jim or I would have noticed several items of news which apparently no one else connected with the quest we were on had seen. We saw them afterward. They were telegraphed from a town called Magazine. The first one was published a few days after we started from Memphis. It read:

"Great excitement was caused in the sparsely settled Boston Mountains region by what was thought to be the awakening of an extinct volcano. The glare of the eruption could be seen for miles. The locality is almost inaccessible, but there are reports that the outpouring of lava caused destructive forest fires."

The next day there was a shorter despatch:

"The reported eruption of a volcano in the Boston Mountains is said to be probably only a display of the aurora borealis, though it is very unusual for this to be visible so far south. Scientists at the University state that volcanic activity in this part of the country is highly improbable."

We kept on day after day, slowly traveling north-

west over the Ozark plateau. The country was so sparsely settled that Bill found it difficult to buy provisions. He loaded up the truck with as much reserve supply as it could carry. As we got farther and farther into the hills, we no longer saw the unpainted cabins of the natives. The mountains and valleys were heavily wooded and there were no roads except an occasional wagon track.

Bill had been with the marines in Nicaragua. He was used to nursing a truck in rough country and repairing it without any tools except a blow-torch when it broke down. This was fortunate for us, because the truck carried the cylinders of compressed gas with which we were to fight the Blattids, if we succeeded in locating their stronghold.

This practically virgin wilderness, with its heavily wooded mountains and valleys and its great unexplored caverns under the surface, was an ideal place for the Blattids to assemble if they were planning a campaign to conquer the earth. We concluded afterward that they had intended to have all the meteors land in this region. It was due to some accident or miscalculation that one of them chanced to land in Big Eagle Swamp.

I haven't said much so far about our plan of campaign. This had been discussed thoroughly with the board of engineers before we started. Details were necessarily left to be decided by circumstances, but the plan itself was really quite simple. It had to be simple, because there was so little that two young men could do against a horde of creatures armed with unimaginably deadly weapons. The only method of attack that might prove successful, however, was one that we could use more effectively than an army. That was an instantaneously fatal gas.

Since the war, the chemical warfare department of every nation has perfected deadly gases, of which other nations know nothing. The gas we were to use was one entirely new in its effect. I must tell enough about its nature so the reader will understand our plans and what actually happened in carrying them out, and still not tell enough so the gas can be identified by the chemical warfare department of any foreign government.

In the first place, it is immensely more lethal than any gas hitherto discovered. Enough of it can be compressed in a steel cylinder six by twelve inches to destroy instantly every living thing in a city of a hundred thousand, and make the site permanently uninhabitable.

The gas itself, so far as we know, is not poisonous. What it does is to act as a catalytic and set up a chemical reaction between the oxygen and the nitrogen of the air. The oxygen and the nitrogen change in its presence to form the inert gas neon. Since neon cannot support life, all living creatures exposed to the gas instantly smother to death.

FOR the benefit of persons unfamiliar with chemistry, it may be said that a catalyst is a substance in the presence of which a chemical reaction takes place between two other substances which are inert to each other in its absence. The catalyst is unchanged in the process and may be used over and over again. This is why the new gas is incomparably more dangerous than any hitherto discovered. It is not dissipated nor destroyed. Released even in small quantities, it will convert all the air within the distance over which it is diffused into a gas fatal to every form of life, while itself remaining as potent as ever. The chemical warfare department of

the government has been unable so far to devise any way of neutralizing the effect of the gas when once released.

Naturally, as the air itself is destroyed, no sort of gas mask is of any use as a protection against it. It is necessary to wear an oxygen helmet. At the last conference in Memphis before we started, our plan of operations had been carefully mapped out. If we succeeded in finding the headquarters of the Blattids, we were to allow ourselves to be captured by them. Jim and I would each wear an oxygen helmet and each would carry another one in case we found any captives from the swamp battle still alive. The extra helmet was to be fastened to a belt on the left hand side, and on the right was to be attached one of the cylinders of gas which could be discharged by opening a valve. Bill was to remain behind, wearing a helmet and guarding the extra cylinders of gas.

It was a desperate plan and the chances were a thousand to one against its succeeding, but no one had been able to devise a better one. Even if we lost our lives, we ought to be able to exterminate the Blattids with us.

We did not venture to build a fire after we reached the Boston Mountains. We were sitting on the ground eating cold baked beans, after a strenuous day spent climbing up mountains through head-high underbrush and down into valleys so narrow that the sun hardly penetrated them. And cold baked beans are not very thrilling after you've eaten them for a week. We were all grumpy and disheartened as we sat there, slapping at mosquitoes which came with the darkness.

It was at that moment that we saw the flashing lights.

Jim suddenly jumped to his feet with a startled "What's that?" Bill and I turned in time to see the ray of pure white light, like an enormous searchlight, cross the sky.

The light disappeared for a moment and then thrust itself into the sky again. A red beam appeared, followed by another white and then a green and then another white. It is hard to describe exactly what happened to these lights. They appeared and disappeared so quickly that it was almost impossible for the eye to follow them. We watched, fascinated, as they flickered against the clouds.

About twelve o'clock they faded, and after talking for a while we turned in. We were convinced that we had reached the end of our journey and tomorrow would see the great adventure.

I had had an idea that I wouldn't be able to sleep, but I don't believe I was awake five minutes. The next thing I knew, Jim was shaking my shoulder. I opened my eyes and saw it was daylight.

"We'd better make an early start," said Jim.

We ate some more cold beans. Then we got out the oxygen helmets. They are a good deal like divers' helmets, except that there is attached to each an oxygen cylinder. There is a plate covering the nose and mouth which snaps shut like a door. We intended to wear the helmets with the plates open until the time came to turn on the gas. We would then close the plates and open the valves, which admitted the oxygen. Of course, if the Blattids tied us up, we'd be out of luck. Still, even then we might be able to turn on the gas, but we would die too.

Well, there was no use worrying about that. We put on the helmets and fastened the gas cylinders and extra helmets to our belts. It would have been a pretty load

to carry for any distance, but we were convinced that the place we had been hunting for weeks lay just over the mountains.

Bill was to stay hidden while we advanced and allowed ourselves to be captured. He was to wait twenty-four hours. Then, if we had not come back, he was to release the contents of the gas cylinders he carried. He was not to get near enough to risk capture, but after loosing the gas, he was to return to the nearest point where he could get in touch with the army engineers. We knew they were not at any time far behind us. The actual work we had to do, but there was an army quietly converging on this point from all directions. We were to have first chance, but if our plan failed, there were more men waiting to sacrifice their lives if necessary.

We hoped that the helmets would cause the Blattids to regard us as a new species of human beings. In that case their scientific curiosity might cause them to capture us alive and study us, rather than kill us.

We climbed the mountain before us and descended into the valley. The next range was steep and thickly wooded. The sun was now high in the sky and we were very hot and uncomfortable in our bulky helmets. We started grimly to climb, leaving Bill behind. When we reached the summit we cautiously crawled through the underbrush until we could look down into the next valley.

I THINK we were both dumb with astonishment for a minute or two. I had expected to see something like the mound in the swamp, and Jim says he did, too. Instead, we were looking into a broad valley, which was like a great fantastic industrial plant. The side of the mountain we were on and the opposite mountain were covered with strange-looking low buildings. Everywhere there were great cranes and curious machines. Rails and pipes led into openings in the rock. Everything was constructed of the unknown shining metal.

Even as we looked, we saw what some of the rails were for. A car, something like a railroad coach, whirled out of one of the openings in the mountain opposite. It was suspended from an overhead rail and sped across the valley and into an opening in the mountain below us. On the floor of the valley were myriads of the Blattids busily working among machines which at first we didn't recognize. We both looked at them curiously.

"There's thousands of them, whatever they are," I said.

"I know what they are!" exclaimed Jim. "Look at them! They're helicopters!"

I recognized them as soon as he spoke. Here were thousands of flying machines able to rise vertically in the air.

"It looks as if they were about ready for an attack," I said. "Good thing we got here in time."

"But my God!" exclaimed Jim despairingly, "what can we do to stop them? There's thousands of them here, and there may be thousands underground."

"It isn't us. It's what we're carrying," I said, tapping my cylinder. "They can't get along without air any better than we can. This is an enclosed valley. If we released the gas from one of these cylinders, it would probably kill all of them that we see."

"But we couldn't be sure about the others," said Jim.

"And Colonel Bullus may be alive still," I continued. "I guess we'd better do as we planned."

Just then I heard a noise behind me. I turned and saw Bill. He crawled over beside us.

"You keep out of sight up here," I said. "If we're not back tomorrow morning, or these bugs down here start to get off in their flying machines, release your gas."

"It's hell staying behind," he said.

"I know, but we've got to obey orders. Be careful to keep out of sight. If they should get hold of you, it would spoil everything." We both shook hands with him; then we started to scramble down the mountainside.

We expected to be stopped at any moment. As we climbed farther and farther down without interruption, we both became nervous.

"Hope they don't turn one of their ray machines on us," muttered Jim.

I glanced down. "Look, they've seen us now," I exclaimed. We had not heard a sound, but the thousands of Blattids in the valley had stopped work and were gazing up at us. Now we saw hundreds more coming from the various openings in the mountains. These were evidently soldiers in command of officers in armor such as we had seen when we were captured at the mound.

They quickly spread out to keep us from escaping. Then several of the officers advanced toward us. Each was armed with what we recognized as the deadly ray tube, but made no move to use it. We had stopped and they stood a little way off surveying us. Even though they were undoubtedly enormous roaches, or creatures similar to that insect, there was a certain dignity about them as they stood there in their shining armor, gravely looking at us.

As I said before, we never heard them make any audible sound in communicating with one another. Evidently obeying an order, a number of the unarmored soldiers surrounded us and gently pushed us forward. The armored leaders turned toward the largest of the openings in the side of the mountain. Standing just inside at the platform was one of the overhead monorail cars, but much larger and more elaborate than the first one we had seen. The officers entered it and we and our guards followed.

The car started into the interior of the mountain. I realized that we were descending, and I suspected that our destination was the central headquarters of the Blattids. We moved so rapidly that I was unable to see very much of the passages and caverns that we passed through. I saw enough to guess that they were stupendous workshops and that I was getting glimpses of a civilization vastly more advanced than ours.

Finally the car stopped. Our guards stayed outside while we followed the officers into what looked like a great laboratory.

The Blattids working there were evidently of superior rank to the officers. They gathered round, gazing at us attentively. Our helmets particularly seemed to interest them. They walked away and had a silent consultation. Then one of them went to a machine that looked like a radio receiver with a glass plate in its front and stood before it for a few seconds. They all gathered in a group again.

"Looks as if they're waiting for something," said Jim. "Wonder what it is?"

Before I had a chance to answer, the officers at the door moved to one side. Several of the soldiers entered, pulling after them two men fastened in nets like

those in which Jim and I had been captured at the mound. The captives were naked and their faces had been so changed by the privations they had undergone, that at first neither Jim nor I recognized them.

Then their eyes met mine and I knew them.

"Don't act as if you recognized them," I said to Jim.

"I don't. Never saw them before."

"It's Colonel Bullus and Saylor."

Jim stared at them. "So it is!" he said. "What are we going to do?"

"We'll have to wait our chance."

The savants were observing all four of us closely. They were evidently unable to decide whether we belonged to the same species. Then they motioned to the guards to remove the nets from Colonel Bullus and Lieutenant Saylor. Next the two men were pushed over beside us.

"Can they understand us?" I asked the Colonel as soon as he was beside me.

"No, they're deaf. They can't hear anything."

"O. K. then. We have two cylinders of gas—I guess you know the kind—and we're going to release it. I have an extra helmet and so has Jim. Do you think you'll have time to put them on?"

"I don't know, but these fellows here are curious and they know so much, they're not afraid of anything. They're watching us talk. Maybe they'll just keep on watching."

"We'll have to chance it," I said. "I'll hand you your helmet and Jim will hand his to Saylor. If they stand around and watch us doing all that, we'll turn on the gas and try to get out. If they stop us, we'll turn on the gas anyhow."

WE think now that the Blattids, being deaf and entirely unfamiliar with audible speech, were taking advantage of our conversation to observe how the strange animals communicated with one another. There was a stirring of interest when Jim and I handed the extra helmets to the other two men. Just before I snapped the front plate of my helmet shut Colonel Bullus said, "If they reach for the ray guns, fall on your faces."

Still the Blattids stood expectingly watching us. They seemed so much like elderly college professors that for a moment I hesitated to turn the valve in the gas tank. Then I thought of the flying machines waiting out in the valley, and the men who had lost their lives in the swamp. I gave the cylinder valve a quick wrench.

It was at this moment, apparently, that the officers standing in the doorway suspected something was wrong. I saw two of them seize their ray tubes, but before they could elevate them, the gas got in its deadly work.

It is not pleasant to see even an insect smother to death, particularly when it is six feet high and seems almost human. The effect of the gas was almost instantaneous. All of the Blattids fell to the floor. We could not make each other hear through the helmets. I sprang toward the door, motioning to the others to follow. As we passed the group of dead officers, I reached over and picked up the ray tube that had fallen from the upraised hand of one of them.

The gas had already penetrated the caverns. All the soldiers and workmen in sight were dead or dying. The monorail car stood where we had left it. We hurried inside. I had noticed that one of the soldiers started and stopped it by pulling a lever which looked like a trolley controller. I jumped for this lever and pulled.

The car started toward the interior of the mountain. I pulled the lever back and the car stopped. Jim ran to the other end of the car where there was a similar arrangement. This time the car started toward the surface.

We joyously shook hands all around. I think we felt that our troubles were over and the Blattids exterminated. We had heard so much about the lethal qualities of the gas that we did not doubt that for a moment. I do not know that anyone had anticipated the one condition that we were up against. The gas had approximately the same density as air. It diffused with almost inconceivable rapidity on the surface and acted as a catalytic, converting into neon all the air with which it came in contact. But the diffusion upward was very slow.

Presently we were passing through caverns where the workers were going about their tasks as usual. We looked at one another in astonishment. Jim and I released more of the gas, but we didn't want to use too much. There were still thousands of Blattids alive in the valley.

In a few minutes more we saw daylight shining through the entrance in the side of the mountain, and the car came to a jarring stop. Here we made another mistake. It did not occur to us that there would probably be officers and soldiers waiting for the car. We crowded out on the platform. Facing us was a large group armed with ray tubes. They did not expect us any more than we expected them, and they gazed at us in astonishment. They must have realized there was something wrong when they saw our two companions.

Several of them reached for the ray tubes, and I knew that even if we turned on the gas, they would get us before they died. I took a desperate chance. I had in my hand the ray tube I had taken from the dead officer. I jumped in front of the others and pressed a button at the end of the tube. A ray of violet light shot out and the Blattids in front of me disappeared just as the sheriff's men had that day back on the mound. But their armor fell clattering to the ground. They were consumed, but their armor was proof against the ray. It lay in a tumbled pile where the officers had been standing a second before.

We walked out of the entrance and stood on the side of the mountain, looking down at the teeming thousands at work beneath us. I think all of us forgot for the moment the next thing we had to do. While we stood there we might very easily have been annihilated if some officer with a ray tube had spied us.

Fortunately our work was done. Even as I looked, a great shudder seemed to pass over all the creatures in the valley. They sank to the ground and never moved again. We glanced up in astonishment. Climbing down the mountain side in all directions were uniformed United States soldiers, each wearing an oxygen helmet and carrying a gas cylinder.

Colonel Bullus and Lieutenant Saylor were the only men preserved alive from the massacre at the swamp. The force there had been attacked after dark with the ray machines, against which no defence was possible. The men who still survived after the battle were executed. Then the swamp was again set afire with a large ray machine on a turntable.

The two officers were kept alive so the Blattids could study the habits of human beings. They were subjected to all sorts of experiments, though they were not tor-

tured or abused. Their main difficulty was about food. The material the Blattids consumed was absolutely nauseating to them. They got along as well as they could on various roots, which were provided for them in abundance.

The fire in the Big Eagle swamp died out the day the Blattids were exterminated. We have never found out how it was kept burning, nor indeed have we as

yet learned much about the Blattids themselves. It has been impossible to make any extensive examination of their stronghold in the remote Boston Mountains because of the gas which remains with its air-destroying properties.

Until some chemist discovers its neutralizing agent, the valley, where the helicopters were gathered, must remain closed and guarded, a place of death.

THE END

The Interplanetary Blues

The sun's a seething hell of blazing yellow,
The clouded Earth is pale and ghastly white,
I'm out here forty million miles from nowhere,
With candent stars in everlasting night.
(I've got the blues.)

I want a world to run around and play on,
I want a world to pass the time away on,
I want a world to settle down and stay on,
I've got those Interplanetary Blues.
(I've got the blues.)

*I know a world that I should love to be on.
I know a girl who's waiting there for me, on
That world where once I hoped to spend an eon.
I've got those Interplanetary Blues!*
(I've got the blues.)

—Charles Cloukey.

What Do You Know?

READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a text-book. Moreover, most of the stories are written in a popular vein, making it possible for anyone to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge of science.

1. What suggestion of "flat-land" can we find in the solar system? (See page 775.)
2. Approximately what fraction of the heat of the sun is received by the earth? (See page 775.)
3. Do the planets move through their orbits with uniform angular velocities? (See page 775.)
4. What is the planetary theory of the atom? (See page 790.)
5. What may be taken to be the primal element? (See page 790.)
6. What suggestion can be made about development and control of atomic energy? (See page 790.)
7. What is the speed of radio impulses? (See page 803.)
8. What is a silverfish? (See page 813.)
9. What is the law of the mutual attraction of bodies? (See page 824.)
10. What averages might be anticipated in flying at very great altitudes? (See page 830.)
11. What remains of temples can be referred to as examples of the supreme in architecture? (See page 856.)
12. What is the distinguishing feature of Lord Kelvin's mariners' compass? (See page 858.)

Trial by Television

By Fred Kennedy

(Continued from page 835)

that they had already covered the last 10,000 miles of their trip. The ship, in a few minutes, would be diving, preparatory to entering the New York hangar.

Grant's body straightened. He would show the detective at the end of the televisior of what stuff he was made.

The recoil engines were shut off, as they came into the earth's atmosphere. The helicopter propeller was gradually lowering the ship into the huge oblong of white raylite, representing the hangar. The task of keeping the helicopter machine at the right speed, and allowing for the strong head wind that tended to blow the ship out of the line, was not easy. Grant brought all his brain faculties into play. He was too engrossed to see the admiring glances cast at him by the engineers.

Eventually the huge ship rested on the stonite reception floor of the hangar.

Grant stood at the main panel. During his attention to the ship's landing, all thoughts of himself, or his situation, had been banished. Now the strain was over, and once again the past day's happenings came before him. He mechanically shut off the helicopter motor that was running in free. The low drone died down to silence. Grant stood thinking. He envisaged himself being led down the escalator tube, by a plain clothes officer; his last gaze at the ship, over whose engines he had made a supreme futile attempt to gain command. He could almost feel the officer's ray gun against his side, a reminder that he was a felon, and the long trial. Grant moved close to the main panel. He pressed his forehead against the circular violet glass of the ray gun, slowly, deliberately. He put up his hand, and pressed a switch.

There was a little stab of blue white light, and Grant toppled over backwards in a crumpled heap.

THE END.

What Happened to Professor Stockley?

By E. M. Scott

(Continued from page 843).

It is enough to say that my car is insulated against gravity, and that it is propelled by a double engine constructed upon the same principle as the minute unit that operates my neutral ray outfit. The motive power is furnished by an engine operated by two powerful springs, working through a series of cogs and gears. The springs are first wound by a crank and then so connected that as one spring runs down, it winds the other one and so on, *ad finem*. Of course, this is not a true perpetual motion mechanism, as both springs will eventually run down and require re-winding; but they will, in this way, operate automatically for several days.

I also found, as I had long suspected, that my neutral ray, if raised to a sufficient strength, will act as a repellent against any degree of cold or heat. This will enable me to close the cab of my vehicle and retain within it, for an indefinite period, the same degree of temperature with which I start.

I finished assembling my ship today, and it now stands upon the roof of this building, ready to start upon the most glorious voyage ever made by man. I shall sail triumphantly through space as did Pegasus of old.

I shall leave this book and part of my wealth here in my safe, although I never expect to return for them. What need, when I can dwell among the gods, to trouble about such matters. Let the foolish police blunder on. Let the rich thieves beware. The

avenger, who is about to pass through space and take his place among the gods, bids them defiance and farewell.

For a moment, after Professor Lantry closed the journal, silence reigned in the room; then the scientist from Hoboken spoke.

"He was mad, mad as a March Hare," he stated. "But where has he gone and how did he ever amass all of this wealth that we found in his safe?"

"Don't ask me." Chief Westley replied. "Mad he must have been, but he led us a pretty dance and now he seems to have gone for keeps."

The Chief and his assistants packed up the loot from Prof. Stockley's safe and conveyed it to headquarters, while Professor Lantry returned to his downtown hotel where he spent the night.

THE police searched far and wide for a homicidal maniac, whom they believed to be at large. Professor Hugh Lantry looked the world over for an insane friend who needed his help. Both quests were futile.

Whether Professor Stockley sailed through space, in defiance of the laws of gravity and equilibrium or whether he met some obscure fate, remains a mooted question. The mysterious criminal never returned. Neither has any one made any considerable progress in the effort to discover an insulator from the power of gravity.

THE END

In the Realm of Books

"Gog"

"Gog," by Giovanni Papini. Published by Harcourt, Brace & Company, 383 Madison Avenue. Translated from the Italian by Mary Prichard Agnetti.

PAPINI'S career has been exceedingly interesting. For a while he severely influenced the literary and intellectual life of Italy. He was in turn Anarchist, Atheist, then Buddhist, but suddenly became a devout Catholic. His "Life of Christ" is the most popular book of its kind and has been translated into a great many languages—sixty or more, it is said.

He also wrote the life of "Saint Augustine," and judging from "Gog" it seems to me that his conversion to Catholicism did not "take" so very much.

"Gog" is not only satire, bitter and abusive withal amusing, but it is a veritable literary scenic railway journey, a Panorama and a Panopticon compressed into a book.

Gog is presented as an ultra-eccentric multi-millionaire, whose parentage is clouded in mystery. He made his money, countless millions apparently, in Chicago, and when he thinks he has enough, severs any and all business connections and makes himself free to enjoy his money. Gog has nothing but contempt for the human race, which he thinks is a big mistake which should be rectified by complete annihilation.

As ants are attracted by honey, so his money draws all the fakery of the world. He is overrun by magicians, sorcerers, exponents of new types of music, poetry, sculpture, science and so forth. Some of the chapters, for instance those dealing

with music and sculpture, are howlingly funny. Equally so are some of the interviews of well-known capitalists, such as Edison and Ford.

How he imitates the drivel handed out by the "Wizard" is a caution. His interview of Ford is screamingly funny. Ford admits that his aim in life is to build factories where all work is done on automotive machines, abolishing all workmen. Ford then explains very carefully his ideas about economics, etc., and Gog is rewarded for his attention by a drink of whiskey served by Henry personally.

In quick succession he interviews Gandhi, Shaw, Freud, Maeterlink and the Kaiser, but ignores the Pope and Mussolini.

Papini, through Gog, takes well-aimed cracks at famous and would-be famous persons, but attacks human fears and fancies with equally savage glee.

He breaks a leg and forthwith surrounds himself with cripples. When his eyesight fails, his companions are blind men. The underlying idea of course is the "I-am-better-off-than-you" feeling.

He flails the shortcomings of science and complains that we cannot even influence the weather.

The senseless collecting of knick-knacks and curios, to which a great many of us are addicted arouses Papini's ire and the chapter in which he describes Ben-Chusis' shop of curios is alone worth the price of the book.

I am tempted to believe that Papini visited America, and saw America eat, referring of course to the drug store meal counters, the armchair lunch rooms and similar native horrors, otherwise he would not urge so seriously the solitary

eating in "A.C.'s" or alimentary closets.

Papini succeeds admirably in drawing a caricature of our entire civilization.

The book on the whole is mentally stimulating, quite amusing and well worth reading.—C. A. Brandt.

Fantastic Adventure Stories

"The House of Darkness," by E. R. Scoggins. Published by the Bobbs Merrill Company in Indianapolis. \$2.00.

"Murder Madness," by Murray Leinster. Published by Brewer & Warren, New York. \$2.00.

THE first of these books deals with adventures in jungles of Yucatan, where a party of explorers led by one Kane, a blond giant, gets first marooned on account of a crashed plane. Then the party arrives at a Mayan settlement where Kane poses as the reincarnation of Quetzalcoatl, and there they discover a library full of Mayan records, and they also discover the key to the Mayan hieroglyphs. They manage to reach another exploring party and Dr. Maring dies peacefully, knowing that the exploration will be carried on.

We have published several of Leinster's stories, so his name is undoubtedly familiar to our readers. "Murder Madness" is the attempt of a South American Master-mind to grab entire control of both Americas, by the use of a poison, which turns the victim first into a hopeless idiot. One Charles Bell is despatched by Washington to break up the plot and in spite of almost insurmountable obstacles, Bell succeeds in breaking the power of the master-mind and in saving his victims.—C. A. Brandt.



In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

THE WOMAN QUESTION IN SCIENCE FICTION STORIES. DR. KELLER AS A PSYCHOLOGIST

Editor, AMAZING STORIES:

I have just finished reading the latest editions of AMAZING STORIES and found every one excellent, especially "Spacehounds of IPC"; it certainly was a corker. I only hope that we will soon get a similar one from Dr. Smith.

Although Dr. Keller's story, "The Steam Shovel," was very interesting it was too short and I was disappointed when I came to the end, although I liked what there was of it.

Although I knew the bare facts of science before I started reading AMAZING STORIES, yet today I know more science than four years of high school gave me, and I can attribute it all to AMAZING STORIES.

I would like to disagree with Mr. G. Robinson when he objects to women in scientification. If a little feminine atmosphere had not appeared in the latest serial, it would have made the story rather dull and uninteresting. Of all the stories in which women appeared, not one was a bit too mushy for me.

Your article on "Inconsistencies and Contradictions" was excellent as they all are, and I don't see how criticisms can be made.

Charles C. Yeager, Jr.,
8058 Cuspin St.,
Holmesburg, Phila., Pa.

(Dr. Smith puts a great deal of work into his fiction and is comparatively new as an author in this line of stories. His work is done slowly because he gives so much thought to it. It seems to us that whenever women have appeared in our stories, they have never failed to fill an interesting niche. We very rarely publish a story in which the woman element is more than an auxiliary. The stories are really supposed to be scientific fiction, pure and simple, but they are often much more interesting when one of the characters is of the fair sex. Perhaps Dr. Keller's story "The Steam Shovel" might have been longer, but we enjoyed it as a strange tale of Occult Psychology. Dr. Keller is a very high authority on this subject.—EDITOR.)

NOTES ON SOME RECENT STORIES

Editor, AMAZING STORIES:

Although a reader of your magazine for over a year, I have never written to you concerning your stories.

After reading Bob Olsen's story "The Master of Mystery," I simply had to write and give you and Mr. Olsen a compliment. In all the time I have been reading AMAZING STORIES, I never have read such an interesting story. Give me or rather us, more stories like that, and I'll subscribe for your magazine for a year!

Your serial "The Stone from the Green Star" is very interesting also.

"Prima Donna, 1980" was far too dry to even be interesting. Who cares anything about voices? If H. G. Wells can't write more interesting stories than that, well, he might just as well stop writing.

Your other stories were good, but none can compare with "The Master of Mystery."

Mr. William Knorre,
603 W. Gordon Avenue,
Spokane, Washington.

(We are delighted to know that Bob Olsen, in "The Master of Mystery," meets your approval. The author is a man of remarkable acquirements and you will find that his work is always well worth reading. As far as the story about the Prima Donna is concerned, we thought it was very vivid, with plenty of action, and it certainly touched very nicely on music and vocalization. It was not written by H. G. Wells, as you imply. For some curious reason, letters of favorable criticism come to us from near and far regions. For after all, four thousand miles establishes farness. Scolding letters, of which you have doubtless read a good many, come from friends near at hand. England, Canada and the coast seem always to be friendly to AMAZING STORIES.—EDITOR.)

(Continued on page 856)

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AN INTERESTING COMMUNICATION ABOUT ATLANTIS AND MU

Editor, AMAZING STORIES:

Coincident with the publication of "The Arrhenius Horror," P. Schuyler Miller has, to my mind, equalled the best efforts of A. Merritt. There is something in its cosmic style greatly reminiscent of "The Color Out of Space," which created a tremendous sensation among readers three years back. Since my opinion of Miller recognizes that in the future he is bound to attract more attention than any other writer, I am willing to defend him against the incriminating accusations of his ostensible ignorance made by P. J. McDermott, as to the hypothetical existence of Atlantis' civilization, re "Through the Vibrations."

Anthropological research has demonstrated beyond the possible shadow of a dissent, that not only did Atlantis exist (not necessarily as described in "Through the Vibrations"), but also that it had attained a high state of civilization. Together with another continent in the Pacific, now submerged, Atlantis and the latter carried on extensive commerce. As my own researches deal mainly with this lost Pacific continent, however, I will endeavor to present irrefutable evidence to verify Miller's conclusions regarding advanced civilization 50,000 years ago.

1. From the translations of certain NAACAL tablets discovered in India many years ago, it would appear that the garden of Eden was not in Asia but in a now sunken continent in the Pacific. More, the biblical story of creation comes from this submerged continent—Mu—not from the Nile or Euphrates Valley.

2. If Atlantis had not reached an advanced intellectual Matrix, how do the independent observations and conclusions of scientific investigators, concerning its actual existence, become accountable? As Merritt describes in "The Moon Pool," the stone ruins in Ponape and Tele and the Nan-Matal may well be the tangible remains of this lost Pacific continent. In that he states, however, that this Pacific continent, known as Mu, was not rent asunder by volcanic forces, but by terrific geological disturbances, Merritt is undoubtedly wrong. "Ja, all wrong," as Von Hetzdorp would say. For the *Iroano Manuscript*, an ancient Maya book written in Yucatan, says of Mu: "In the year 6 Kan, on the 11 Mulac, in the month of Zak, there occurred terrific earthquakes, which continued until the 13 Chuen."

3. Deducing from the evidence discovered on Easter Island; on Ponape; on the Marquesas and Carolina Island; the writings of Plutarch, the Sacred Naacal Tablets; and above all, the *Iroano Manuscript*, the conclusion is reached that approximately 50,000 years ago the inhabitants of Mu had developed a civilization superior, in many respects, to our own. Moreover, the 555 statues on Easter Island, and the great temple 300 ft. long by 60 ft. wide on Ponape, indicate, at least, that Easter Island was part of a great continent—Mu.

4. Among overwhelming evidence is included the extract from Plutarch—"Size of Salon"—Sanches, the High Priest of Sais, told Solon (600 B.C.), also Psenophis, a priest of Heliopolis, that 9000 years before, the relations of the Egyptians with the inhabitants of Mu, had been interrupted because of cataclysms—since the destruction of Atlantis by earthquakes and submersion.

5. No wonder Merritt ascertains the language of his subterranean inhabitants as ancient Polynesian, for it is known that on scores of the Pacific Isles are remains of a great civilization. This civilization, logic shows, existed in Mu, north of Hawaii to south as far as the Fiji and Easter Island. A simple computation reveals, on the basis of Plutarch, that both Mu and Atlantis were in existence up to 15,000 years ago.

6. As I make the statement in which I can prove intelligent beings, highly civilized, a white race, existed 50,000 years in the past, every dollar an hour archeologist throws back his head and cackles with glee. Man, they state, did not materialize upon the face of the earth until the early Pleistocene Era. Not only that, they maintain, but the theory prevails that the white race originated in Asia. These statements, made by scientists in their anxiety to substantiate the "Monkey Theory," are a little too well known to suit me. In other words, these theories have never been proved; whereas I can confidently assert, without question, man appeared on Earth in the Tertiary Era. If this does not satisfy P. J. McDermott, I will amplify

this statement to read,—"Man was in a high state of civilization during the latter part of the Tertiary Era."

7. Aside from the Naacal Tablets and the Iroano Mss., there are indisputable data contained within the Codex Cortesianus, an old Maya book now in the National Museum of Madrid; and the Shasa Record, discovered by Schliemann in the old Buddhist Temple in Thosa, Tibet, to support my researches. Translated, the Codex states—"By his strong arm Homen caused the earth to tremble and during the night Mu, the country of the hills of Earth, was submerged."

8. The amazing beauty of the Tahitians for a semi-savage race, at which I have frequently marveled, is due to their being descendants of the inhabitants of Mu. Strangely enough, as though to verify my statement, the most scientific version of the legend-of-creation is found among the cannibalistic races of the South Sea Islands, particularly the Marquesans.

9. Finally, and most important, I have reserved a bombshell which will cause a great many scientists to rise to their feet in indignation. Thus:

a. It was on the continent of Mu that man first came into being!

b. The civilizations of the early Greeks, Persians, the Chaldeans, Egyptians and Hindus, as well as those of Babylonia and Yucatan, were definitely preceded by this great civilization of Mu!

Doubtless the above facts, as evidenced by various vignettes too numerous to mention, will clarify P. J. McDermott's quandary as to civilization on Atlantis; will, also, sustain P. Schuyler Miller's unquestionable masterpiece of Atlantis.

Bernard J. Kenton,
 416 Frankfort Ave.,
 Cleveland, Ohio.

(The continents of Mu and of Atlantis have occasioned any amount of discussion. Plato seems to have started the ball rolling and it has kept rolling ever since. Recently a book was published in reference to Mu, so it is evident that the two strange continents are exciting more and more interest. A few years ago we never heard of Mu. Your letter speaks for itself. We are too apt to think that because we can get the World Series in on the radio, our civilization is way ahead of that of the rest of the world's. But if we will look at the architectural triumphs of the Egyptians and at the statues whose remains have been saved from the ruins of the ancient Greeks, or if you will look up at the acropolis of Athens and see the beautiful ruins of the Parthenon and Erechtheum, you will see that we have a great deal to learn from the civilization of two thousand and more years ago. The literature of old Greece is the finest the world has produced, even if it didn't take the shape of "best sellers." We think, therefore, that you have rather the best of those who criticize P. Schuyler Miller, who, we can assure you, is well able to take care of himself. He is a fine mathematician and the type of author AMAZING STORIES wants. It really seems that until such things as the statues on Easter Island and other strange things which you cite, are described, it is not safe to criticize those who use Atlantis or Mu as the basis of fiction. We find your letter most interesting and are extremely glad to publish it.—EDITOR.)

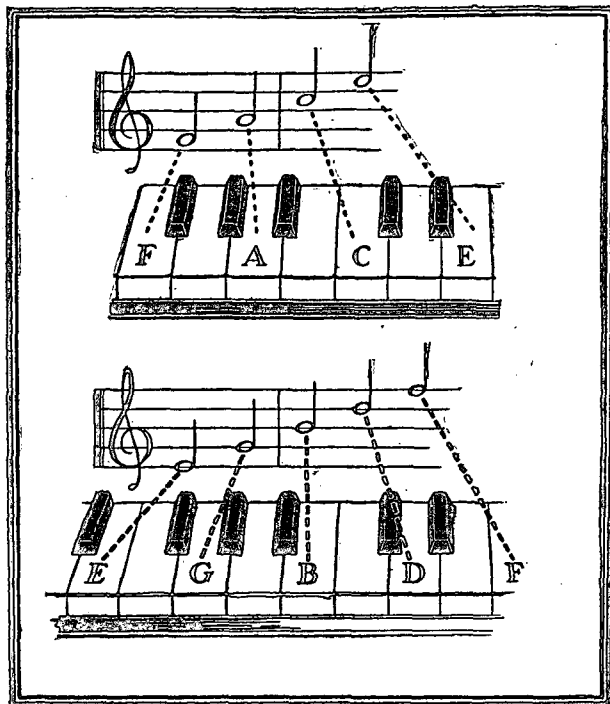
A TRIBUTE TO DR. SMITH FROM AN ADMIRER.

Editor, AMAZING STORIES:

The sole purpose of this communication is to congratulate "our" magazine, and Dr. Edward E. Smith, its premier author; the magazine for obtaining and keeping such a writer, and Dr. Smith for having and exercising the ability to write such splendid stories as "Skylark" and "Spacehound."

"Spacehounds" is excellent; a finished work by a master writer. It is without doubt the best story since "Skylark Three." Its technical side is superb—possible and logical. And the story side is great! If all your writers could and would handle a love interest with such manifest skill and cleanness as Dr. Smith, there would be no occasion for kicks about "slush" in your stories. "Spacehounds" is written skillfully and well. Dr. Smith certainly possesses the knack of handling words properly. He expresses exactly what he wishes to say in clear, vigorous language.

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"Spacehounds" certainly deserves a sequel. And it's wide open for one too! What mind-staggering developments may come from the eager activities of the energetic brains of Brandon and Westfall! Interplanetary travel developed to the *nth* degree! Galactic flight! And who except Dr. Smith knows what! So let him tell it. (For he surely will if given the encouragement.) Let a super-author write a truly super-scientific story. By all means let's have a sequel to "Spacehounds!"

Richard Dodson,
507 South Davis,
Kirkville, Mo.

(We do not know what will become of Dr. Smith if he continues to get many more letters such as yours. His was a case of very high grade latent talent simply waiting for expression and from the first he has been most highly appreciated and admired. You will be interested in observing how many people have sent communications to us concerning his stories and practically all of them were highly commendatory. Dr. Smith has the quality of putting his matter into readable shape and his material is based on high educational lines, for he is a student of many years' repute. We will encourage Dr. Smith to the utmost of our power to give us more of his stories.—EDITOR.)

A COMFORTING LETTER FROM A FRIENDLY CORRESPONDENT

Editor, AMAZING STORIES:

Up to six months ago, and my discovery of AMAZING STORIES, I had no idea that a magazine of this type existed. I had often wished for fiction along the line of that of Jules Verne and H. G. Wells, but I had no idea my want could be satisfied until I met your magazine. And now I never miss a copy of the Monthly or Quarterly.

I have no fault to find with your stories, your artists, your cover designs or your paper. But I do find fault with a number of your critics in the Discussions Department. They have given you so many careless and undeserved slams that it is about time they were slammed a little themselves.

Criticism is only an outlet for one's *ego* in most cases. Anybody can find fault. It is not necessarily an indication of superior intelligence. Intelligent criticism, on the other hand, is of some value and comes from those with broadened minds.

Is it not strange that so many of your critics feel themselves capable of criticizing the art of your cover designs and illustrations? Some even go into detail on the cover designs and confidently tell your artists (who have studied art for years and make a living at it) how to draw.

Why should the paper and the size of the magazine cause so much anguish to some? They seem to be hard up for subject matter for criticism.

Then there are those who find fault with the construction or plot of your stories. These critics are usually high school students who have just become syntax conscious and who should stick to the dull essays recommended by their English teachers if they are looking only for examples of classic English prose. AMAZING STORIES should be read for entertainment.

Another class of critics who come in numbers legion are those who list ten to thirty stories published in AMAZING STORIES and indicate their various, finely divided degrees of excellence or the reverse (in the opinions of said critics). Who cares? A casual or even enthusiastic mention of one or two or the best should be sufficient, because all but the best are divided between those who like them and those who don't. So why bother to mention them at all? No story has ever appeared in AMAZING STORIES that was not liked by some.

The scientific critics, to my mind, are your only legitimate critics, but even they should use a little more imagination in some instances and remember that what we know as scientific facts might eventually be changed.

Vernon S. Snow,
726 Somerset Pl., N. W.,
Washington, D. C.

(Your letter is certainly a great comfort. It is a principle with the editors of AMAZING STORIES to publish letters which criticize unfavorably and your letter shows that you have encountered and read some of these disagreeable effusions. But you must remember that criticism may be valuable in direct proportion

to its severity—it leads one to avoid errors in the future. Of course, you must not suppose that we take errors as accurately determined by our critics. In many instances, what they consider errors, are absolutely the correct material. Any amount of work is put into the magazine and it is a great satisfaction to find that so many do really and truly enjoy it. We have our eyes on the future and hope to continue to make the magazine better and better.—EDITOR.)

A VERY INTERESTING LETTER FROM SCOTLAND

Editor, AMAZING STORIES:

Thinking you would like to hear from one of your readers in Scotland, I set myself to the task.

I must congratulate Dr. Smith on his second story, "The Skylark of Space." I really think his scientific data was wonderful. Being a scientific instrument maker by trade, also being employed with Lord Kelvin's firm it is naturally interesting.

One of the stories I read in your April magazine which was entitled, "The Laughing Death" was very fine, the only fault was that it ended abruptly. I would be very much in your debt if you could let me know who your agents are in Glasgow as I seem to be only able to get AMAZING STORIES in Woolworth, after they are about 2 to 3 months old. I think I have only read about one AMAZING STORIES Quarterly. I would like very much to be able to get your magazines regularly.

Jock Wenton,
10 George St.,
Parsley, Scotland, G. B.

(We are more than pleased with this letter from across the water. Scotland and England always have a good word for AMAZING STORIES. We have not as yet heard much from the Free State, but Great Britain and her colonies have always treated us royally. Dr. Smith is a scientist of high standing, so you see that you have expressed a very just judgment about him. It is certainly interesting to get a letter from one who was with Lord Kelvin's firm in making his celebrated scientific instruments. By keeping down the inertia of his compass card and keeping it very light, he avoided the use of alcohol, used in virtually all ships' compasses of American make. Of course, navigation has changed. Gyroscopic instruments and wireless have brought about new results and the old-time navigator feels that he has nothing to do but to begin his work all over again. It is interesting to contrast the chronometric keeping of Greenwich time all the way across the oceans with the assistance given by the modern use of radio navigation. Our English agent is The Atlas Publishing Co., Rolls House, Breams Building, London, England. They will probably give you the address to a Glasgow representative. May we suggest, however, that it might facilitate matters exceedingly to subscribe to AMAZING STORIES? Then you will receive them with perfect regularity.—EDITOR.)

THE THERMOS BOTTLE COMPARISON. IS OUR UNIVERSE A GIGANTIC ATOM?

Editor, AMAZING STORIES:

After reading several of your very interesting interplanetary travel stories, there are a few things puzzling me. The first is: Is space "cold?" By cold I mean, would a man really have to wear heavy insulation. The only heat loss would be by radiation and the human body isn't very great on radiating. Space wouldn't conduct the heat of the body away. For instance, take the principle of a thermos bottle. Just fancy being in a huge thermos bottle and the body generating heat all the time—phew!

The second question: "Where would a person become weightless in a stationary position in space?" If the "pull" of the sun can cause a tide on the earth, then the only place where a person would be really weightless is some place where all the gravitation of all the planets, stars and suns of the universe counteract each other.

It seems to me Courtney Edwards, the "hero" of "Submicroscopic," found life on an electron—this gives rise to a wonderful thought—is our Universe an atom of some gigantic structure? I don't expect you to answer that one. You can tell Capt. Meek he can use that idea for what it's worth. And please ask him where Courtney got his extra weight from when he measured his size? It seems to me that the space

between the electron and proton must weigh a considerable amount. It's a terrible pity the adjuster is just a product of Capt. Meek's imagination, or every man would grow to the size of a real be-man.

Alfred Mattiser,
60 Saratoga St.,
Buffalo, N. Y.

(The thermos bottle comparison, or analogy, is a very good one. Your views about the nullifying of gravity are very well expressed. The idea about the Universe being a mammoth atom, or molecule, is not new. The space between proton and electron is supposed to be without weight. We are glad you enjoy, as is evident, Capt. Meek's work. He is a valued contributor.—EDITOR.)

**"OUR MAGAZINE" SEEMS TO BE LIKE
A HARD-BOILED EGG—"IT CAN'T
BE BEAT"**

Editor, AMAZING STORIES:

I should like to join in the high approval your readers give you as I think our magazine can and never will be beat.

I have a few suggestions I would like to make to our magazine. I do not think the name is quite as appropriate as it could be. The words, "Amazing Stories" could include many different kinds of stories. Please do not put any more detective stories in ever. But, let's have more medical thrills. And, how about establishing a correspondence section or something or other?

Your August, 1931 issue was very good, especially the story "Submicroscopic" which dealt with cold facts. I never saw a front piece that would equal that one called, "A Curious Substance." There was one thing that I did not understand in "Submicroscopic" and that was how would anything get heavier when it was made larger by expanding the atoms in its composition.

I am fourteen and so my viewpoint can not equal that of an adult.

Robert Casey,
4625 E. 85th Street,
Cleveland, Ohio.

(One of our correspondents finds the same fault in "Submicroscopic" that you do—there is no suggestion of a change in weight with the change in size. Perhaps the author may send us his views for publication in these columns. There is a correspondence club in active life, as you will have seen from the letters from its secretary, which were published in these columns. You will also find letters from our readers asking for correspondence with other interested students of science. The weight question in "Submicroscopic" has occasioned considerable trouble and discussion.—EDITOR.)

**A QUESTION ABOUT THE EARTH AND
ITS ATMOSPHERE**

Editor, AMAZING STORIES:

I have been an interested reader of AMAZING STORIES for quite a long time and can't begin to tell you how I like them. Such wonderful theories and ideas virtually spell the word genius, especially the stories of Dr. Smith and Keller.

I would like to ask a question that has been on my mind for some time. Is the atmosphere of the earth considered part of the earth, and could a person say safely that he lives in the earth? I think not, but I would like to know the viewpoints of people that know more about the subject before I express mine.

Your discussion on "A Curious Substance" in the August edition is very interesting, as are all the preceding discussions, and I get endless knowledge every time a new one appears.

Although I like to find mistakes in stories by different authors, yet I absolutely can find nothing wrong with the premiere of all scientifiction —AMAZING STORIES.

Charles C. Yeager,
8058 Crispin Street,
Holmesburg,
Philadelphia, Pa.

(Usually the atmosphere of the earth is not treated as a part of it, at least not very literally. You can continue to say that you live on the earth and in its atmosphere. If you lived in a mine you could say quite correctly that you lived in the earth, just as fishes live in the sea, yet are considered to live on the earth.—EDITOR.)



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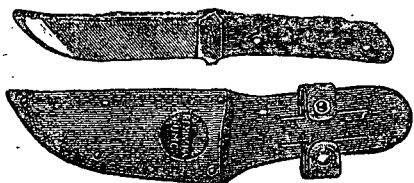
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SOME NOTES ON "SUBMICROSCOPIC." DIFFICULTIES PRESENTED BY THE RELATION OF WEIGHT AND SIZE

Editor, AMAZING STORIES:

I am a constant reader of **AMAZING STORIES**—for two years, in fact. Capt. Meek is usually good, but in his last story, "Submicroscopic," I am afraid he made a few errors. When he was in Ulm he was supposed to be normal, and weigh the same as the other people. This could not be, for then he would be destroying matter. He would weigh the same as he did in his original size. Although he did manage to make the planetary electrons of the atoms shorten the radii of their individual orbits, he would still weigh the same because the space between the planetary electrons and the nucleus, protons and fixed electrons does not have any weight. Then in the city of Ulm he would sink right through the ground, because his great weight of approximately 135 pounds could not be supported on such a small fraction of a square millimeter as he was supposed to be on. He also stated that he had the limit of smallness, or infinity. If this were so, he would have seen an atom as a great solar system and have landed on an electron, which is infinity to us, or the smallest besides the Beta particle of X-rays. He did not describe his going through any such experience. If our solar system could be compared to an atom of flourine, which has electrons, and we are composed of atoms, then maybe the electrons are composed of still smaller atoms relative to the electron as the atom is relative to our world. We can only suppose and imagine what infinity is relative to size.

In the Discussions columns, someone said that maybe some of the stars we see are the light they gave eons ago. He also went so far as to say that one star might be the light given off by our sun eons ago. For this to be possible, our sun would have to be traveling faster than the speed of light, so that it could beat its own light of millions of years ago to our present position. This is impossible, as figures show that our sun is traveling at only the rate of 200 miles per second around the center of our immediate galaxy, and astronomers cannot see much farther than the limits of our galaxy. Then, also, the light is extinguished when its source is extinguished, a law of physics.

Truman Record,

652 Lewis Avenue,
Kansas City, Mo.

(We shall hope for an answer to your letter to come from the author of "Submicroscopic." The story is a very nice bit of phantasy, so you must not look for strict logic in it. Your criticism is very interesting to the writer; it is an example of the high quality of the comments we receive. The stories, even those of the highly imaginary type, have to stand fire from the readers. This fact we accept, in all seriousness as a compliment to **AMAZING STORIES**. In your criticism of a writer in the Discussions columns you are quite correct. We shall hope to hear from you again. Where do you get the law about light?—EDITOR.)

CRITICAL NOTES ON THE STORIES IN OUR MAGAZINE

Editor, AMAZING STORIES:

After having read your magazine for about one and a half years, including your "Discussions," I have finally been able to muster sufficient courage to write a line.

A. S., without any doubt whatever, fills a vacancy I have always noticed in the field of magazines, and particularly of fictional ones. But, to get on, may I ask what has become of *Aladra Septama*?

Without a doubt, "Skylark" was the best story I have read. Although its sequel, "Skylark III," did not quite come up to it, it ranked above all others. Particularly did I enjoy "Paradise and Iron" in one of your Quarterlies, also "Birth of a New Republic."

Don't you think "Drums of Tapajos" deserves a sequel, or is it a question of the spirit moving the author? This story also shows considerable merit.

As to your July number, I think its only weak spot was "Cleon of Yzdril." I read this in 10 minutes. Figure out for yourself how much I skipped over. The August issue was O.K.

Nevertheless, if our local newsdealer is a day late with A. S., I go downtown and get it.

Guy W. Lowe,

1937 Auburn Avenue,
Cincinnati, Ohio.

(You should not require courage to enter the Discussions columns. Such letters as yours are highly appreciated by us and (we are sure) by our readers. P. Schuyler Miller is one of our most accomplished authors. We advise you to give an hour to the story you criticize unfavorably, and you will be astonished at how much there is in it. "Drums of Tapajos" certainly deserves a sequel and we hope for one. You will hear from *Aladra Septama* again.—EDITOR.)

A LETTER FROM A YOUTHFUL CORRESPONDENT, ONE OF GENERAL CRITICISM AND GOOD WISHES

Editor, AMAZING STORIES:

Here is another letter from one of your youthful correspondents. The age is 15. The cause: appreciation of that wonderful tale "The Beautiful Bacillus," by Patrick Dutton in the June issue of **AMAZING STORIES**. It was superb, being, in my estimation, even better than "The Purple Plague" which I had heretofore considered your best tale. "The Beautiful Bacillus" at least gives a most novel viewpoint of atavism, which is eternally interesting to most readers of your magazine, I should imagine.

"The Incredible Formula" was interesting, but was a little too tragic and gruesome for me; it was amazing, however. In your estimation would it be altogether impossible to restore life after the natural death by the use of revivifying drugs or chemicals? Witness *adrenalin*. Other more marvelous things have been accomplished.

I have just finished the September, 1931 issue and I rate the stories in the following rank:

- 1—"The Arrhenius Horror"
- 2—"The Steam Shovel"
- 3—"Awlo of Ulm"
- 4—"The Lunar Chrysalis"
- 5—"Spacehounds of IPC"

"Awlo of Ulm" was a satisfactory sequel to "Submicroscopic." Meek is one of your leading authors. Hang on to him. "The Steam Shovel" was more in the realm of the supernatural than in that of science. It was an excellent story, however, and get Keller to write more short stories like it. "Spacehounds of IPC" has turned out to be the most uninteresting story that I have read in **AMAZING STORIES** for many a month. "The Lunar Chrysalis" was entertaining and is a good example of Gallun's ability. It wasn't up to "Atomic Fire," though. "The Arrhenius Horror" is beyond comment.

Morey is your best cover artist. Paul is the best interior illustration artist. The others are incidental. Keep that magazine as it is.

"Discussions" are excellent, always.

A. Brooks Edwall,
4845 North Keeler Avenue,
Chicago, Ill.

(The correspondents who favor us with such excellent letters as this one, are great helpers in the work of the magazine. It is most interesting and valuable to have the work of so many writers and of such various opinions in the Discussions Columns. The Editors feel that this section of the magazine is of high value, and unfavorable criticisms add spice and flavor to it. You are one of several correspondents who have said that they want the magazine left as it is, and hope it will not be changed. The editors are using every effort to keep it as it is with one reservation, namely, to make it better as it goes along.—EDITOR.)

A TRIBUTE TO PAUL BOLTON'S STORY. THE PRAISE WAS UNCONSCIOUS AND THEREFORE MORE IMPRESSIVE

Editor, AMAZING STORIES:

I bought my first copy of your magazine, the August issue, the other day, on the recommendation of a friend, and was very much impressed with the story, "Time Hoaxers," by Paul Bolton. One of the neighbors to whom I lent the magazine said, "Why, when do you s'pose that happened?" She thought that it was really true.

Mr. Bolton is a good writer. I would like to read some more of his stories.

Mrs. R. E. L. Brown,
318 W. 23rd Street,
Oklahoma City, Okla.

(Mr. Bolton has received a true compliment from your friend—impressive because it was an unconscious tribute. Perhaps the writer of "Time Hoaxers" will favor us with another story as good as this first one.—EDITOR.)

A RATHER UNCOMPLIMENTARY LETTER, BUT YOU OUGHT ALWAYS TO GIVE YOUR ADDRESS

Editor, AMAZING STORIES:

Though I have been reading your unique publication for a number of years, this is the first time I have attempted to communicate with you.

I have just completed your September issue and must say that, with the exception of "The Lunar Chrysalis" and "The Steam Shovel," I found it rather dry.

Captain Meek's "Awlo of Ulm" was disgusting, and his hero, with his extravagant chivalry, smacked of the vulgar drivel of Edgar Rice Burroughs, who, if I remember correctly, wrote a story of Mars in one of your Quarterlies a couple of years ago.

It still clings to my memory, this Martian story, whose hero reached the distant planet by merely wishing to be there and saw colors impossible to describe, because, forsooth, they couldn't be seen on earth.

The author evidently lost sight of the fact that if an eye couldn't see a color on earth, it couldn't see it anywhere else, for colors are universally similar, though they may occur with more or less scarcity in different places.

I am against your printing stories by famous writers, as you seem to be able to afford only their most mediocre productions; rather give the obscure authors your patronage.

I think you ought to change your name to Scientific Stories, a name as distinctive as your present one, and more original to boot, since one of your Editors discovered it.

But adverse criticism was not my only motive in writing to you; some years ago I read a genuine masterpiece of scientific fiction—"Rice's Ray," a short story in which the scientific interest was both interplanetary and earthly, since Venus was made to resemble our own earth during the Jurassic age, and whose vividness proves that, after all, a story can be good without love interest, though I have no objection to it if handled properly (alas, however, as authors, some of your contributors are good bricklayers). I return to "Rice's Ray"—I think that one of the secrets of its success was the fact that it was salted with a little bit of humor, not too much, but just enough. "Rice's Ray" was not scientific—it was literature!

Please tell me the author's name, as I have forgotten it, and does he still write for you. Also he promised a sequel—did it appear?

Stanley Branch.
(No address given.)

(It is curious to see you selected so well known and popular an author as Edgar Rice Burroughs as an example of all that is poor in story writing. Capt. Meek is one of our most distinguished contributors and his work has been greatly admired by our readers. We are not making a distinction between famous writers and obscure authors, the only thing that we look at is the merit of the stories. You say some of our contributors are good bricklayers. We might say that some of our correspondents are good brick-bat throwers. The author of "Rice's Ray" is Harry Martin.—EDITOR.)

SOME QUESTIONS ABOUT THE REFLECTION AND REFRACTION OF LIGHTS WITH REFERENCE TO "THE LUNAR CHRYSALIS"

Editor, AMAZING STORIES:

I have been a constant and admiring reader of your magazine and have often been tempted to write you concerning various points in the stories you have published, but have refrained until now—"reserving my opinion" as somebody said.

A condition in "The Lunar Chrysalis" has puzzled me. The Moon men constructed spheres of "crystallized ether" about their ships and later around the earth and moon. If ether is the medium of electromagnetic vibrations, the crystallized ether would be satisfactory for radio and television except for this. The laws of refraction for known transparent solids, liquids and gases are that light, in passing from the less dense to the more dense material



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tends to bevel toward the normal, according to the index of refraction and the angle of incidence. The normal refers to a line perpendicular to the junction of the two mediums. Also total reflection occurs when rays in the less refractive medium are incident at an angle less than the critical angle, which is that angle with the junction of the mediums, above which the rays are refracted through, and below which they are reflected.

If these applied to the "crystallized ether," would not radio waves approaching the spheres be reflected or at least be refracted at such an angle as to miss the receivers completely? Also the television apparatus would be hindered by the refraction of the waves producing the familiar double image seen by looking at an object at an angle through a pane of glass.

As to the climatic conditions produced by the ether spheres about the earth, there is question. The polar regions would get no more solar radiation than before and the only way heat could be brought to these regions is by terrific air currents from the equatorial regions, and what would cause these?

These are some questions that have puzzled me and if you do not think this as so much nonsense, I would like to have you consider this matter.

Also, I am wondering where one could put fifty arms on a suit. I should think it quite cumbersome. Why couldn't radio waves, sent from the miniature world be picked up by receivers on the full-sized world or vice-versa? Would the ether be different?

My head is positively aching, but there is some hope. Someday I will get me a mechanical integrator as in "Where the Atoms Failed" and then I'll figure things out for myself without getting the physics book down from the shelf.

Henry A. Perry, Jr.,
949 Washington Street,
Newtonville, Mass.

(In one sense we are glad that there is enough in this story to set you to thinking about the physics of light until your head aches. But we will leave it to the author to straighten out your troubles. As far as the fifty arm suit is concerned, one reader objects to the picture not showing a fifty arm suit. It is hard to please everyone.—Editor.)

AN APPRECIATIVE LETTER FROM ENGLAND

Editor, AMAZING STORIES:

A reader of AMAZING STORIES since April, 1930, I have been so provoked by the incessant references in the Discussions column to "The Moon Pool"—"Paradox X"—"The Face in the Abyss" and other alleged masterpieces, that I shall be greatly indebted if you will publish the following:

Will any reader desiring to dispose of all, or the major portion of the A. S. issues prior to April, 1930, likewise Quarterly issues prior to the Spring Edition, 1931, kindly get in touch with me? I am willing to purchase at cost price plus postage.

So far as your publication is concerned, I can only say that it satisfies a previously unappealed desire on my part for the unusual and the fantastic in the realm of literature.

The average Englishman, unfortunately is inclined to despise imaginative fiction; hence one rarely encounters such works here, and until I came across A. S., I used to spend much of my spare time rereading Messrs' Wells' and Burroughs' efforts.

To generalize, your authors maintain a fairly high standard, though some of their products are somewhat reminiscent of other works. One wonders, for instance, whether Captain Meek has ever read "The Girl in the Golden Atom."

Again the explanations forthcoming in some of the stories, while exceedingly interesting, are apt, in my humble opinion, to grow wearisome when protracted into the unrelieved monotony of whole pages of textbook-like jargon.

Would that some of the offenders could be compelled to wade through stuff such as the following:

"COSMIC BOREDOM," by R. G. Lyle. "Ever since Funf's discovery in 2095 G. J.," said the professor, "that the then recently discovered element, Phagium, when subjected to an intense inter-atomic ray, produced a directional field of magnetic force, by which matter, in rapid rotation, could be heated to almost incredible temperature, the latter involving, per se, needless to say—" and so on for half an hour, till we come to the really interesting

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30x8	2.45	30x4.50	2.45
32x8	2.75	32x4.50	2.75
34x8	3.00	34x4.50	3.00
36x8	3.25	36x4.50	3.25
38x8	3.50	38x4.50	3.50
40x8	3.75	40x4.50	3.75
42x8	4.00	42x4.50	4.00
44x8	4.25	44x4.50	4.25
46x8	4.50	46x4.50	4.50
48x8	4.75	48x4.50	4.75
50x8	5.00	50x4.50	5.00
52x8	5.25	52x4.50	5.25
54x8	5.50	54x4.50	5.50
56x8	5.75	56x4.50	5.75
58x8	6.00	58x4.50	6.00
60x8	6.25	60x4.50	6.25
62x8	6.50	62x4.50	6.50
64x8	6.75	64x4.50	6.75
66x8	7.00	66x4.50	7.00
68x8	7.25	68x4.50	7.25
70x8	7.50	70x4.50	7.50
72x8	7.75	72x4.50	7.75
74x8	8.00	74x4.50	8.00
76x8	8.25	76x4.50	8.25
78x8	8.50	78x4.50	8.50
80x8	8.75	80x4.50	8.75
82x8	9.00	82x4.50	9.00
84x8	9.25	84x4.50	9.25
86x8	9.50	86x4.50	9.50
88x8	9.75	88x4.50	9.75
90x8	10.00	90x4.50	10.00
92x8	10.25	92x4.50	10.25
94x8	10.50	94x4.50	10.50
96x8	10.75	96x4.50	10.75
98x8	11.00	98x4.50	11.00
100x8	11.25	100x4.50	11.25
102x8	11.50	102x4.50	11.50
104x8	11.75	104x4.50	11.75
106x8	12.00	106x4.50	12.00
108x8	12.25	108x4.50	12.25
110x8	12.50	110x4.50	12.50
112x8	12.75	112x4.50	12.75
114x8	13.00	114x4.50	13.00
116x8	13.25	116x4.50	13.25
118x8	13.50	118x4.50	13.50
120x8	13.75	120x4.50	13.75
122x8	14.00	122x4.50	14.00
124x8	14.25	124x4.50	14.25
126x8	14.50	126x4.50	14.50
128x8	14.75	128x4.50	14.75
130x8	15.00	130x4.50	15.00
132x8	15.25	132x4.50	15.25
134x8	15.50	134x4.50	15.50
136x8	15.75	136x4.50	15.75
138x8	16.00	138x4.50	16.00
140x8	16.25	140x4.50	16.25
142x8	16.50	142x4.50	16.50
144x8	16.75	144x4.50	16.75
146x8	17.00	146x4.50	17.00
148x8	17.25	148x4.50	17.25
150x8	17.50	150x4.50	17.50
152x8	17.75	152x4.50	17.75
154x8	18.00	154x4.50	18.00
156x8	18.25	156x4.50	18.25
158x8	18.50	158x4.50	18.50
160x8	18.75	160x4.50	18.75
162x8	19.00	162x4.50	19.00
164x8	19.25	164x4.50	19.25
166x8	19.50	166x4.50	19.50
168x8	19.75	168x4.50	19.75
170x8	20.00	170x4.50	20.00
172x8	20.25	172x4.50	20.25
174x8	20.50	174x4.50	20.50
176x8	20.75	176x4.50	20.75
178x8	21.00	178x4.50	21.00
180x8	21.25	180x4.50	21.25
182x8	21.50	182x4.50	21.50
184x8	21.75	184x4.50	21.75
186x8	22.00	186x4.50	22.00
188x8	22.25	188x4.50	22.25
190x8	22.50	190x4.50	22.50
192x8	22.75	192x4.50	22.75
194x8	23.00	194x4.50	23.00
196x8	23.25	196x4.50	23.25
198x8	23.50	198x4.50	23.50
200x8	23.75	200x4.50	23.75
202x8	24.00	202x4.50	24.00
204x8	24.25	204x4.50	24.25
206x8	24.50	206x4.50	24.50
208x8	24.75	208x4.50	24.75
210x8	25.00	210x4.50	25.00
212x8	25.25	212x4.50	25.25
214x8	25.50	214x4.50	25.50
216x8	25.75	216x4.50	25.75
218x8	26.00	218x4.50	26.00
220x8	26.25	220x4.50	26.25
222x8	26.50	222x4.50	26.50
224x8	26.75	224x4.50	26.75
226x8	27.00	226x4.50	27.00
228x8	27.25	228x4.50	27.25
230x8	27.50	230x4.50	27.50
232x8	27.75	232x4.50	27.75
234x8	28.00	234x4.50	28.00
236x8	28.25	236x4.50	28.25
238x8	28.50	238x4.50	28.50
240x8	28.75	240x4.50	28.75
242x8	29.00	242x4.50	29.00
244x8	29.25	244x4.50	29.25
246x8	29.50	246x4.50	29.50
248x8	29.75	248x4.50	29.75
250x8	30.00	250x4.50	30.00
252x8	30.25	252x4.50	30.25
254x8	30.50	254x4.50	30.50
256x8	30.75	256x4.50	30.75
258x8	31.00	258x4.50	31.00
260x8	31.25	260x4.50	31.25
262x8	31.50	262x4.50	31.50
264x8	31.75	264x4.50	31.75
266x8	32.00	266x4.50	32.00
268x8	32.25	268x4.50	32.25
270x8	32.50	270x4.50	32.50
272x8	32.75	272x4.50	32.75
274x8	33.00	274x4.50	33.00
276x8	33.25	276x4.50	33.25
278x8	33.50	278x4.50	33.50
280x8	33.75	280x4.50	33.75
282x8	34.00	282x4.50	34.00
284x8	34.25	284x4.50	34.25
286x8	34.50	286x4.50	34.50
288x8	34.75	288x4.50	34.75
290x8	35.00	290x4.50	35.00
292x8	35.25	292x4.50	35.25
294x8	35.50	294x4.50	35.50
296x8	35.75	296x4.50	35.75
298x8	36.00	298x4.50	36.00
300x8	36.25	300x4.50	36.25
302x8	36.50	302x4.50	36.50
304x8	36.75	304x4.50	36.75
306x8	37.00	306x4.50	37.00
308x8	37.25	308x4.50	37.25
310x8	37.50	310x4.50	37.50
312x8	37.75	312x4.50	37.75
314x8	38.00	314x4.50	38.00
316x8	38.25	316x4.50	38.25
318x8	38.50	318x4.50	38.50
320x8	38.75	320x4.50	38.75
322x8	39.00	322x4.50	39.00
324x8	39.25	324x4.50	39.25
326x8	39.50	326x4.50	39.50
328x8	39.75	328x4.50	39.75
330x8	40.00	330x4.50	40.00
332x8	40.25	332x4.50	40.25
334x8	40.50	334x4.50	40.50
336x8	40.75	336x4.50	40.75
338x8	41.00	338x4.50	41.00
340x8	41.25	340x4.50	41.25
342x8	41.50	342x4.50	41.50
344x8	41.75	344x4.50	41.75
346x8	42.00	346x4.50	42.00
348x8	42.25	348x4.50	42.25
350x8	42.50	350x4.50	42.50
352x8	42.75	352x4.50	42.75
354x8	43.00	354x4.50	43.00
356x8	43.25	356x4.50	43.25
358x8	43.50	358x4.50	43.50
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362x8	44.00	362x4.50	44.00
364x8	44.25	364x4.50	44.25
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368x8	44.75	368x4.50	44.75
370x8	45.00	370x4.50	45.00
372x8	45.25	372x4.50	45.25
374x8	45.50	374x4.50	45.50
376x8	45.75	376x4.50	45.75
378x8	46.00	378x4.50	46.00
380x8	46.25	380x4.50	46.25
382x8	46.50	382x4.50	46.50
384x8	46.75	384x4.50	46.75
386x8	47.00	386x4.50	47.00
388x8	47.25	388x4.50	47.25
390x8	47.50	390x4.50	47.50
392x8	47.75	392x4.50	47.75
394x8	48.00	394x4.50	48.00
396x8	48.25	396x4.50	48.25
398x8	48.50	398x4.50	48.50
400x8	48.75	400x4.50	48.75
402x8	49.00	402x4.50	49.00
404x8	49.25	404x4.50	49.25
406x8	49.50	406x4.50	49.50
408x8	49.75	408x4.50	49.75
410x8	50.00	410x4.50	50.00
412x8	50.25	412x4.50	50.25
414x8	50.50	414x4.50	50.50
416x8	50.75	416x4.50	50.75
418x8	51.00	418x4.50	51.00
420x8	51.25	420x4.50	51.25
422x8	51.50	422x4.50	51.50
424x8	51.75	424x4.50	51.75
426x8	52.00	426x4.50	52.00
428x8	52.25	428x4.50	52.25
430x8	52.50	430x4.50	52.50
432x8	52.75	432x4.50	52.75
434x8	53.00	434x4.50	53.00
436x8	53.25	436x4.50	53.25
438x8	53.50	438x4.50	53.50
440x8	53.75	440x4.50	53.75
442x8	54.00	442x4.50	54.00
444x8	54.25	444x4.50	54.25
446x8	54.50	446x4.50	54.50
448x8	54.75	448x4.50	54.75
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452x8	55.25	452x4.50	55.25
454x8	55.50	454x4.50	55.50
456x8	55.75	456x4.50	55.75
458x8	56.00	458x4.50	56.00
460x8	56.25	460x4.50	56.25
462x8	56.50	462x4.50	56.50
464x8	56.75	464x4.50	56.75
466x8	57.00	466x4.50	57.00
468x8	57.25	468x4.50	57.25
470x8	57.50	470x4.50	57.50
472x8	57.75	472x4.50	57.75
474x8	58.00	474x4.50	58.00
476x8	58.25	476x4.50	58.25
478x8	58.50		

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Must every woman pay the price of a moment's happiness in bitter tears and years of regret? Must millions of homes be ruined—lovers and sweethearts driven apart—marriages totter to the brink of divorce—the sacred joys of sex relations be denied? YES—Just as long as men and women remain ignorant of the simple facts of life.

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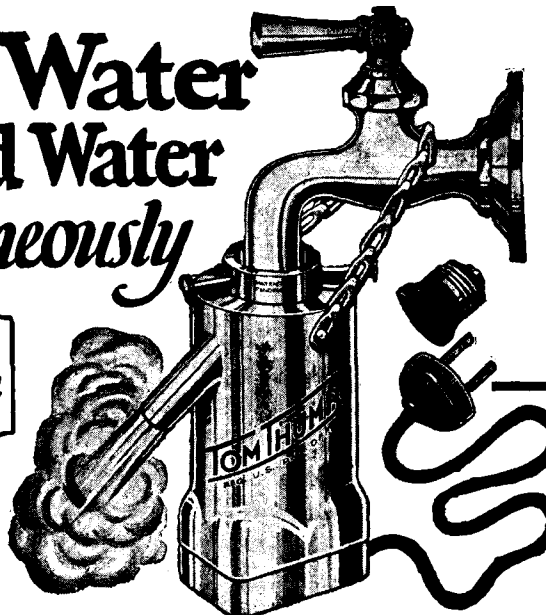
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Will Make Up to \$40⁰⁰ a Day Easy



Just plug in at the nearest electric outlet and presto!—you have instantaneous, continuous running hot water from your cold water faucet. This tells you in a nutshell why the invention of the Tom Thumb automatic electric hot water heater will make it easy for you to make up to \$40.00 a day.

The electric heated steaming hot water comes direct from the faucet instantaneously—yes, as quickly as you can turn on the current and the hot water runs indefinitely until you shut off the electricity. The cost is small—convenience is great. Useful wherever hot water is needed—no fuss or bother—attached to any faucet in a jiffy. Works on either AC or DC current. You and your customers will marvel and be delighted at this new discovery of electrical science. The small cost of \$3.75 for the Tom Thumb, Junior (110 volts) or \$5.75 for Tom Thumb, Senior (220 volts) does the work of any expensive hot water heating equipment costing several hundred dollars—the Tom Thumb absolutely eliminates the plumber or any other additional expense. We are the originators, manufacturers, owners and patentees of the famous and original Tom Thumb electric hot water heater.

No Installation — Stick One On Faucet and Sale Is Made

Think of it! No installation, no extra expense—nothing else to do but to stick it on the faucet, turn on electricity and it is there ready for duty. Easily removed when not wanted and easily carried to any part of house where cold water is running and hot water is wanted. Has many uses—too numerous to mention here. Fits any faucet. Weighs only 1 lb., made entirely of aluminum. Cannot rust, no moving parts, nothing to get out of order.

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This new scientific invention offers tremendous sales possibilities. At the low price of \$3.75 you should be able to sell at least 40 a day. You pocket \$1.00 cash commission on every sale. If you would like to know all about this proposition, sign your name and address to coupon or, better still, get started selling at once. Attach money order for \$2.75 to coupon and rush to us. We will send complete selling outfit containing 1 Tom Thumb electric hot water heater, order blanks, selling particulars and everything necessary to help you get started making up to \$40.00 a day at once.

Terminal Products Co., Inc.

Dept. 512

200 HUDSON ST.
NEW YORK

TERMINAL PRODUCTS CO., Inc.
Dept. 512, 200 Hudson St.,
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The Tom Thumb electric hot water heater looks like a big money maker to me. I am sure interested in knowing how to make up to \$40.00 a day with this proposition. I have checked below the proposition I am interested in at this moment.

☐ Enclosed find money order for \$2.75. Please send me one Tom Thumb Junior, order blanks and selling information. It is understood upon receipt of this sample outfit I will be permitted to take orders and collect \$1.00 cash deposit for every Tom Thumb, Jr. I sell, or \$1.50 for every Tom Thumb, Sr. I sell. It is understood I will send the orders to you and you will ship direct to my customer C. O. D. for the balance.

☐ I would like to have additional information before acting as one of your agents. Please send this by return mail free of obligation.

Name

Street

City State

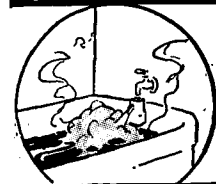
Canadians please send cash with order at same price
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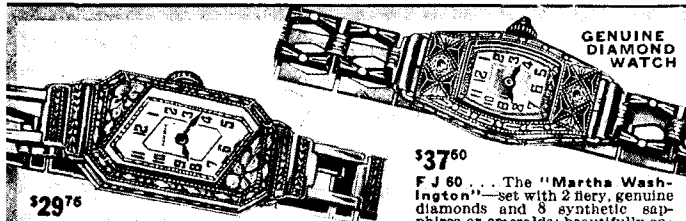
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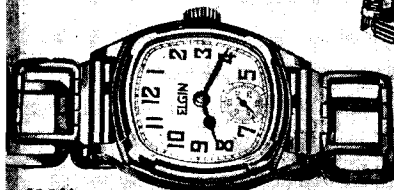
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F J 60 . . . The "Martha Washington"—set with 2 fiery, genuine diamonds and 8 synthetic sapphires or emeralds; beautifully engraved 14-K Solid White Gold case fitted with guaranteed 15-jewel movement. Engraved open link bracelet. A value that defies duplication at \$37.50. Only \$3.65 a Mo.

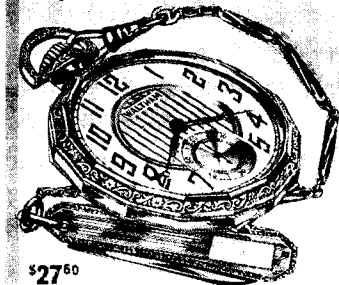
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F J 61 . . . The new nationally advertised Benrus "Sweetheart"—guaranteed dependable 15-jewel shock-proof Benrus movement in a most beautifully hand engraved, dainty case; protection seal keeps out dust. Engraved, open-link bracelet. Greatly reduced from former price. Only \$2.88 a Month.



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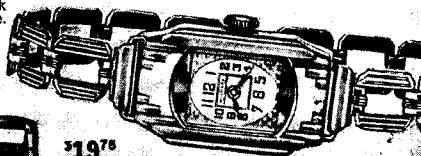
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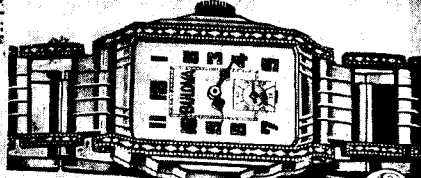
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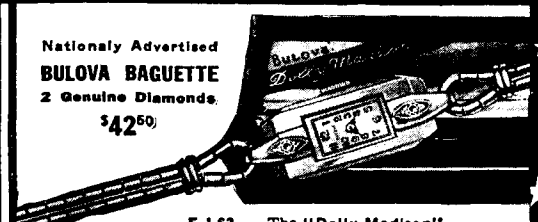
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